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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
A1806017

Application of the California High-Speed Rail Authority for approval to Construct two New Underpass Grade Separated Crossings, Under the Proposed High-Speed Rail Tracks at 9th Avenue (215.67) and Cairo Avenue (216.09) Located in the County of Kings, State of California.

Application No. _____

APPLICATION

In accordance with Rule 3.7 and 3.9 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission” or “CPUC”), the Applicant, California High-Speed Rail (“Authority” or “CHSRA”) hereby seeks authority from the Commission to construct two new underpass grade separations at 9th Avenue and Cairo Avenue under the High-Speed Rail tracks. These projects are located within the Construction Package 2-3 (“CP 2-3”) in Kings County, State of California. The proposed Grade-Separated crossing at 9th Avenue and Cairo Avenue will cross under the CHSRA mainlines, respectively, and are part of the proposed California High-Speed Train System (CHSTS).

In support of this application, the Applicant asserts that:

1. The Applicant’s exact legal name is California High-Speed Rail Authority, hereinafter referred to as “Authority” or “CHSRA”, a public agency and subdivision of State of California formed pursuant to the California High-Speed Rail Act. (California Public Utilities Code § 185000 et seq.)

2. Applicant's principal place of business is located at the office of:

California High-Speed Rail Authority (CHSRA)

770 L Street, Suite 620

Sacramento, CA 95814

Attention: Bruce Armistead - Director of Operations and Maintenance

E-mail: Bruce.armistead@hsr.ca.gov

3. All correspondence, communication notices, orders, and other papers relative to this application should be addressed to:

CP 2-3 Team

California High-Speed Rail Authority

1775 Park Street, Building 75A

Selma, CA 93662

Attention: Jose de Jesus Martinez – Engineering Oversight Manager

E-mail: JosedeJesus.Martinez@hsr.ca.gov

Phone: (559) 558-5199

4. CHSRA is the railroad property owner at the proposed crossings. CHSRA is working cooperatively with the stakeholders along the corridor, which include government agencies and railroads.

5. The authorization to construct the Project is requested pursuant to Section 1201 through 1205 of the Public Utilities Code and is made in accordance with Rule 3.7 and Rule 3.9 of the CPUC Rules of Practice and Procedure.

6. The proposed grade-separated crossings at 9th Avenue and Cairo Avenue are part of the CHSRA Construction Package 2-3 (CP 2-3) program and include construction of two new grade separated crossings at 9th Avenue and Cairo Avenue. These proposed grade separations will conform to CHSRA and CPUC standards.

The CP 2-3 project limits extend 65.5 miles from East American Avenue in Fresno County to one mile north of Tulare-Kern County line. The CP 2-3 project consists of two CHSTS mainline tracks, generally aligned in a north-south direction. The proposed crossings of the CP 2-3 project include approximately thirty-six (36) grade separations in the counties of Fresno, Tulare, and Kings, including viaducts, underpasses and overpasses.

7. The purpose of these Grade-Separated crossings in the CP 2-3 project is to provide the safety of motorists and pedestrians. The proposed new grade-separated crossings at 9th Avenue and Cairo Avenue allow for safe and simultaneous movement of roadway and rail modes of travel. All CHSRA structures are in compliance with Arema standards throughout the project.

For the protection of the general public and CHSTS passengers, the CHSTS will be a closed corridor with a continuous 8 foot high welded wire mesh Access Restricted (AR) fence or barrier to prevent unauthorized access to CHSRA right-of-way. In addition to the AR fence or barrier walls, intrusion monitoring and detection is proposed.

8. For the proposed crossings stated herein as required by CPUC Rules of Practice and Procedure, Rule 3.7 and Rule 3.9, the CHSTS milepost, proposed CPUC crossing number, and DOT crossing number on the Sierra Subdivision are listed in the following table.

Crossing Name	CHSTS Milepost	Proposed CPUC#	Proposed DOT#
9th Avenue	215.67	135S-215.67-B	973177D
Cairo Avenue	216.09	135S-216.09-B	973178K

For 9th Avenue, the following structure coordinates are latitude 36.442° and longitude -119.618°.

For Cairo Avenue, the following structure coordinates are latitude 36.437° and longitude -119.614°.

9. The nearest existing public crossings on each side of the proposed crossings at 9th Avenue and Cairo Avenue are located as follows: (Rule 3.7 (b))

- To the west of both proposed crossings, 9th and Cairo Avenues, the existing Riverdale Avenue grade crossing, having (CPUC Crossing Number 002-976.20, DOT Crossing Number 028437P, and BNSF Milepost 976.2, located in Fresno County).

10. The overall length and width dimensions of the proposed grade-separated crossings 9th Avenue and Cairo Avenue are provided in Structural drawings in Exhibit D.

11. The overhead contact system, which will supply energy to the rail vehicles, is consistent with the requirements of General Orders 26-D, 95, 128, and 176.

The horizontal and vertical clearance dimensions provided in the structural drawings in Exhibit D comply with CPUC General Order 26-D. See table A for further information for horizontal and vertical clearances for the proposed crossings at 9th Avenue and Cairo Avenue.

Table A: Exhibit D Structure Overhead Drawings

Crossing Name	Minimum Vertical Clearance	Minimum Horizontal Clearance
9 th Avenue	15'-0"	19'-6 5/8" from centerline of road to closest obstruction
Cairo Avenue	15'-0"	18'-5" from centerline of road to closest obstruction

The construction of High Speed-Rail crossing at 9th Avenue will require a temporary street closure of 9th Avenue, between Corona Avenue and Cairo Avenue, in order to construct the grade separation. The 9th Avenue alternative route for going north or south will be SR43 towards the west and 8th Avenue towards the east.

The construction of High Speed- Rail crossing at Cairo Avenue will require a temporary street closure of Cairo Avenue at 9th Avenue and 8th Avenue at Corona Avenue, in order to construct the grade separation. Access to 8 ½ Avenue shall be maintained at all times during the closure. The Cairo Avenue alternative route will be 9th Avenue and SR43 on the east.

12. The CHSRA, as the lead agency under the provisions of the California Environmental Quality Act (CEQA), prepared the *Final Environmental Impact Report/ Environmental Impact Statement (Final EIR/EIS)* for the Fresno to Bakersfield section of the California High-Speed Train project. The Federal Railroad Administration (FRA) was the lead agency under the National Environmental Policy Act (NEPA). The Notice of Determination (NOD) for the *Final EIR/EIS* was certified on May 07, 2014, and the Record of Decision (ROD) was dated on June 27, 2014. The *Final EIR/EIS* for the Fresno to Bakersfield Section of the California High-Speed Train project was provided to the Commission (Rule 2.4) on archival and standard CD-ROM/DVD as Exhibit I to Application A1709017. The *final EIR/EIS* is made a part of hereof by reference. A Notice of Availability for the *final EIR/EIS* and Certificate of Service are filed with this application.

Construction of the California High Speed Train System (CHSTS) complies with all environmental regulations for the proposed construction of two underpass grade separation at 9th Avenue and Cairo Avenue under the High-Speed Rail tracks.

The environmental impacts and mitigation specifically associated with the portion of the project can be found within the following sections of the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for the Fresno to Bakersfield Section of the California High-Speed Train Project, dated April 2014, related to the proposed railroad crossings at California High Speed Rail Train System, Sierra Subdivision milepost 215.67 and 216.09.

Final EIR/EIS Summary

- Volume I: Report, Chapter 2, Alternatives, discusses the alternative alignments contemplated in the EIR/EIS. (2-21 to 2-32)
- Volume I: Report, Chapter 7, Preferred Alternative, identifies and discusses the Preferred Alternative. (7-7 to 7-15)
- Roadway crossings over CHSRA are Project Design Features to mitigate impacts to local transportation networks resulting from implementation of the Preferred Alternative. (3.19-7 to 3.19-9)
- 9th Avenue and Cairo Avenue underpasses are identified in Volume I: Report; Chapter 3.2, Transportation, Figure (3.2-22.)

- Impacts resulting from implementation of the Preferred Alternative are analyzed in their appropriate sections in Volume I: Report sections and in Volume II: Technical Appendices.
- 9th Avenue and Cairo Avenue underpasses designs are detailed in Volume III, Alignment Plans, Section C- Roadway and Grade Separation Plans.
- CHSRA Approved Resolution # CHSRA 14-10, attachment B approved Mitigation, Monitoring and Reporting Program for the certified FEIR/EIS with specific measures to be implemented project-wide. These measures, in addition to Project Design Features, are applicable to the 9th and Cairo structures.

Permitting

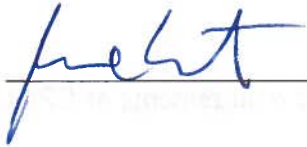
- The project has the following permits for the current design of HSR CP 2-3 (including 9th and Cairo structures):
- Voluntary Emissions Reduction Agreement – San Joaquin Valley Air Pollution Control District
- Dust Control Plan – San Joaquin Valley Air Pollution Control District
- California Endangered Species Act Incidental Take Permit – California Department of Fish and Wildlife
- Master Streambed Alteration Agreement – California Department of Fish and Wildlife
- Biological Opinion – U.S. Fish & Wildlife Service
- Stormwater Pollution Prevention Plan – State Water Resources Control Board
- Clean Water Act Section 401 Certification – State Water Resources Control Board
- Clean Water Act Section 404 Permit- U.S. Army Corps of Engineers

**WHEREFORE, Applicant, California High-Speed Rail Authority, respectfully
requests:**

1. That the Public Utilities Commission of the State of California issue an order authorizing the construction of two new grade-separated highway-rail crossings (underpass) at 9th Avenue and Cairo Avenue on the plans and specifications set forth in Exhibit D and Exhibit E, pursuant to the provisions of Sections 1201-1205, inclusive, of the California Public Utilities Code and Commission Rules of Practice and Procedure, Rule 3.7 and Rule 3.9.
2. That the Order provides Thirty-Six (36) months from the date of such an Order within which to complete the work requested.

9th Avenue (215.67) and Cairo
Avenue (216.09)

California High-Speed Rail Authority

A handwritten signature in blue ink, appearing to read "f. e. t.", is written over a horizontal line.

Bruce Armistead

770 L Street, Suite 620

Sacramento, CA 95814

“List of Exhibits”

In support of the present application for the proposed structures at 9th Avenue and Cairo Avenue, the following exhibits are transmitted as required by the referenced portions of CPUC Rules of Practice and Procedures, Rule 3.7:

- EXHIBIT A: Crossing Legal Descriptions in conformance with the requirements of CPUC Rules of Practice and Procedure, Rule 3.7 (a).
 - A1 – 9th Avenue
 - A2 – Cairo Avenue

- EXHIBIT B: Location Map; showing the location of the Project in relation to the existing roads and streets in general vicinity, in conformance with the requirements of CPUC Rules of Practice and Procedure, Rule 3.7 (e).
 - B1 – 9th Avenue
 - B2 – Cairo Avenue

- EXHIBIT C: Vicinity Map; showing accurate locations of all streets, roads, property lines, tracks, buildings, structures or other obstructions to view in each direction from proposed crossing, in conformance with the requirements of CPUC Rules of Practice and Procedure, Rule 3.7 (d).
 - C1 – 9th Avenue
 - C2 – Cairo Avenue

- EXHIBIT D: Overhead Structural Drawings; showing Plan view, Elevation, and Typical Cross Sections of the proposed crossing.
 - D1 – 9th Avenue
 - D2 – Cairo Avenue

- EXHIBIT E: Profile Plan Drawings and Track Guideway; showing underground lines and grade line and rate of grades of approaches on all roadways and railroads affected by the proposed crossing at 9th Avenue and Cairo Avenue, in conformance with the requirements of CPUC Rule of Practice and Procedure, Rule 3.7 (f).
 - E1 – 9th Avenue
 - E2 – Cairo Avenue
- EXHIBIT F: Motorist Information Plan; showing temporary closures and detours on all roadways and railroads affected by the proposed crossings at 9th Avenue and Cairo Avenue.
 - F1 – 9th Avenue
 - F2 – Cairo Avenue
- EXHIBIT G: Local Project Support
 - G1 – Letter from CHSRA to Kings County
 - G2 – Kings County Basis of Design
- EXHIBIT H: Verification for Application
- EXHIBIT I: Notice of Availability
 - The approved final Environmental Impact Report / Environmental Impact Statement (EIR/EIS) pursuant to Division 13 of the Public Resources Code, California Environmental Quality Act (CEQA). The approved document included in DVD format contains the Record of Decision (ROD), Memorandum of Agreement between the Federal Railroad Administration (FRA), CHSRA and Surface Transportation Board (STB).
- EXHIBIT J: Scoping Memo
 - J1 – 9th Avenue
 - J2 – Cairo Avenue
- EXHIBIT K: Certification of Service

EXHIBIT A-1

Crossing Legal Descriptions

9th Avenue

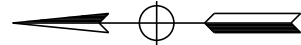
Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

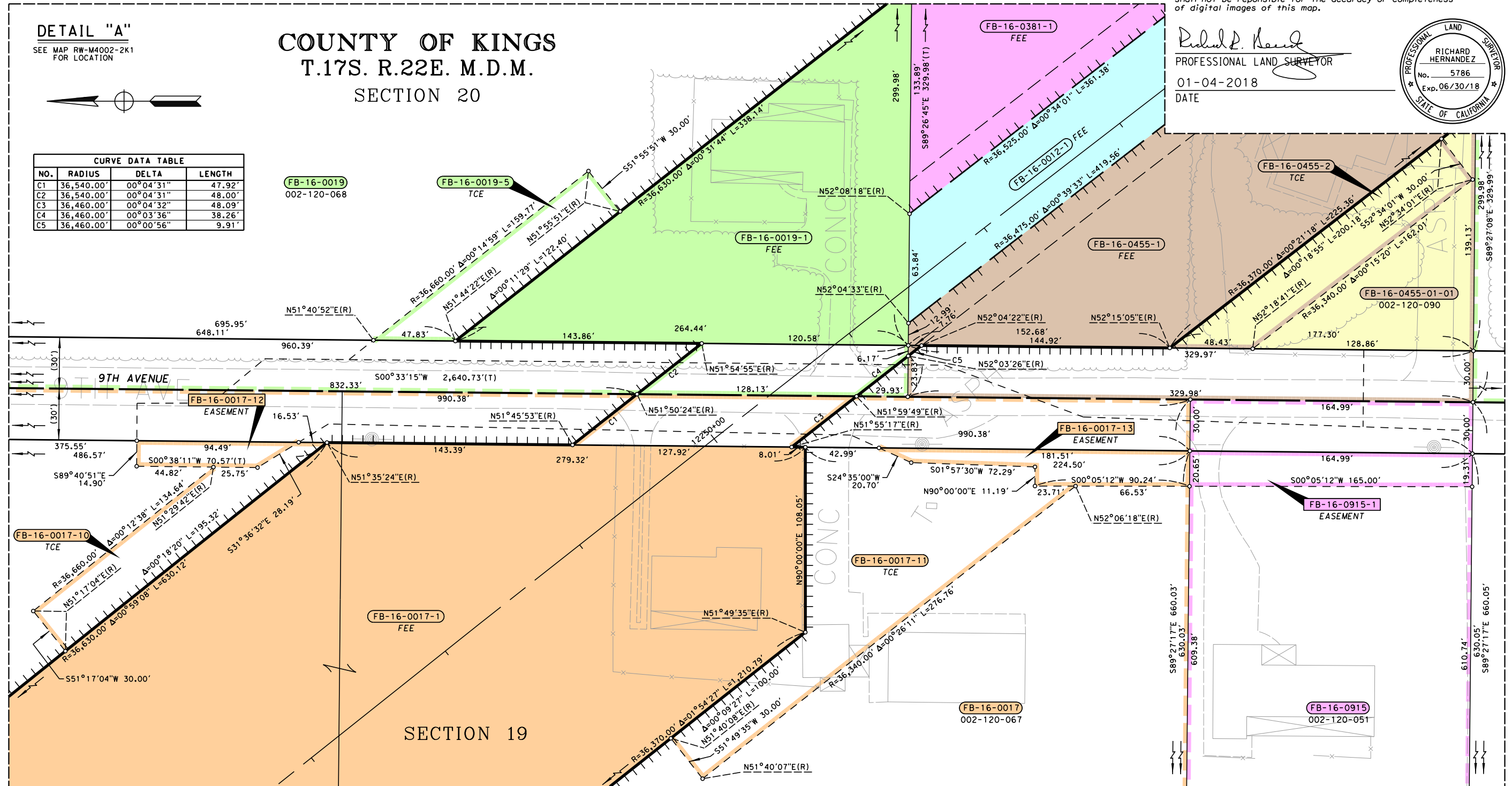
R/W PROJECT SURVEYOR: D. SCOTT	DATE	REVISIONS	BY	DATE	REVISIONS	BY	DATE	REVISIONS	BY	DATE	REVISIONS	BY
02-02-18	CHANGED 002-120-051 TO 0915		R. HERNANDEZ									

DETAIL "A"
SEE MAP RW-M4002-2K1
FOR LOCATION



CURVE DATA TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	36,540.00'	00°04'31"	47.92'
C2	36,540.00'	00°04'31"	48.00'
C3	36,460.00'	00°04'32"	48.09'
C4	36,460.00'	00°03'36"	38.26'
C5	36,460.00'	00°00'56"	9.91'

COUNTY OF KINGS
T.17S. R.22E. M.D.M.
SECTION 20



NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

Richard P. Hernandez
PROFESSIONAL LAND SURVEYOR
01-04-2018
DATE



PARCEL#	TITLE CODE	GRANTOR	AREAS ① (square feet or as noted)				REMARKS
			TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	
FB-16-0017-1	F	Jon L. Stout et al. Trsts					SEE MAP RW-M4002-2K1
FB-16-0017-10	TCE	Jon L. Stout et al. Trsts		4,879			
FB-16-0017-11	TCE	Jon L. Stout et al. Trsts		14,577			
FB-16-0017-12	E	Jon L. Stout et al. Trsts		1,235			ELEC EASE-PG&E
FB-16-0017-13	E	Jon L. Stout et al. Trsts		2,651			ELEC EASE-PG&E
FB-16-0012-1	F	Gus Garcia & Sandra Garcia					SEE MAP RW-M4002-2K1
FB-16-0019-1	F	Jon L. Stout et al. Trsts					SEE MAP RW-M4002-2K1
FB-16-0019-5	TCE	Jon L. Stout et al. Trsts		4,233			
FB-16-0381-1	F	Gus Garcia & Sandra Garcia					SEE MAP RW-M4002-2K1
FB-16-0455-1	F	Gus Garcia & Sandra Garcia					SEE MAP RW-M4002-2K1
FB-16-0455-2	TCE	Gus Garcia & Sandra Garcia		5,433			
FB-16-0915-1	E	Casey J Stout Rev Trst, Et al	103,950	3,297		103,950	ELEC EASE-PG&E

GRANTOR NOTES	
①	Areas shown exclude underlying fee in the adjoining public way. Ac=acres, SF=Square Feet
②	Indicates Underlying Fee (UF) Area
	Indicates Indeterminate UF
	TITLE CODES:
	F=Fee
	E=Easement (Ease)
	TCE=Temp Construction Ease
	F2X=Fee converted to Excess
	X2F=Excess converted to Fee
	F2E=Fee converted to Ease
	E2F=Ease converted to Fee
	O=Other (see Remarks)

NOTES	
Horizontal Datum: NAD83 (NRS2007), California Coordinate System of 1983. Coordinates and bearing are CCS83, Zone 4, Epoch 2007.00. Distances and stationing are grid distances. Divide by 0.999938170 to obtain ground level distances. All distances are in feet (U.S. Survey Feet).	
LEGEND	
Access Prohibited	Access Superseded
Access Opening (Private)	Existing R/W Superseded
Radial Bearing	Section Corner
Total Distance	Found Monument as noted
Calculated point	(Not monument symbol)
Title to State	Required for Others
HST R/W	High-Speed Train R/W

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

**RIGHT OF WAY
APPRAISAL MAP
RW-M4002-2K1-A**

FEET 0 15 30 60 90

CONTRACT	COUNTY	PM	DWG No.	SHEET NO.	TOTAL SHEETS
CP2-3	KIN		RW-M4002-2K1-A	2-A	31

EXHIBIT A-2

Crossing Legal Descriptions

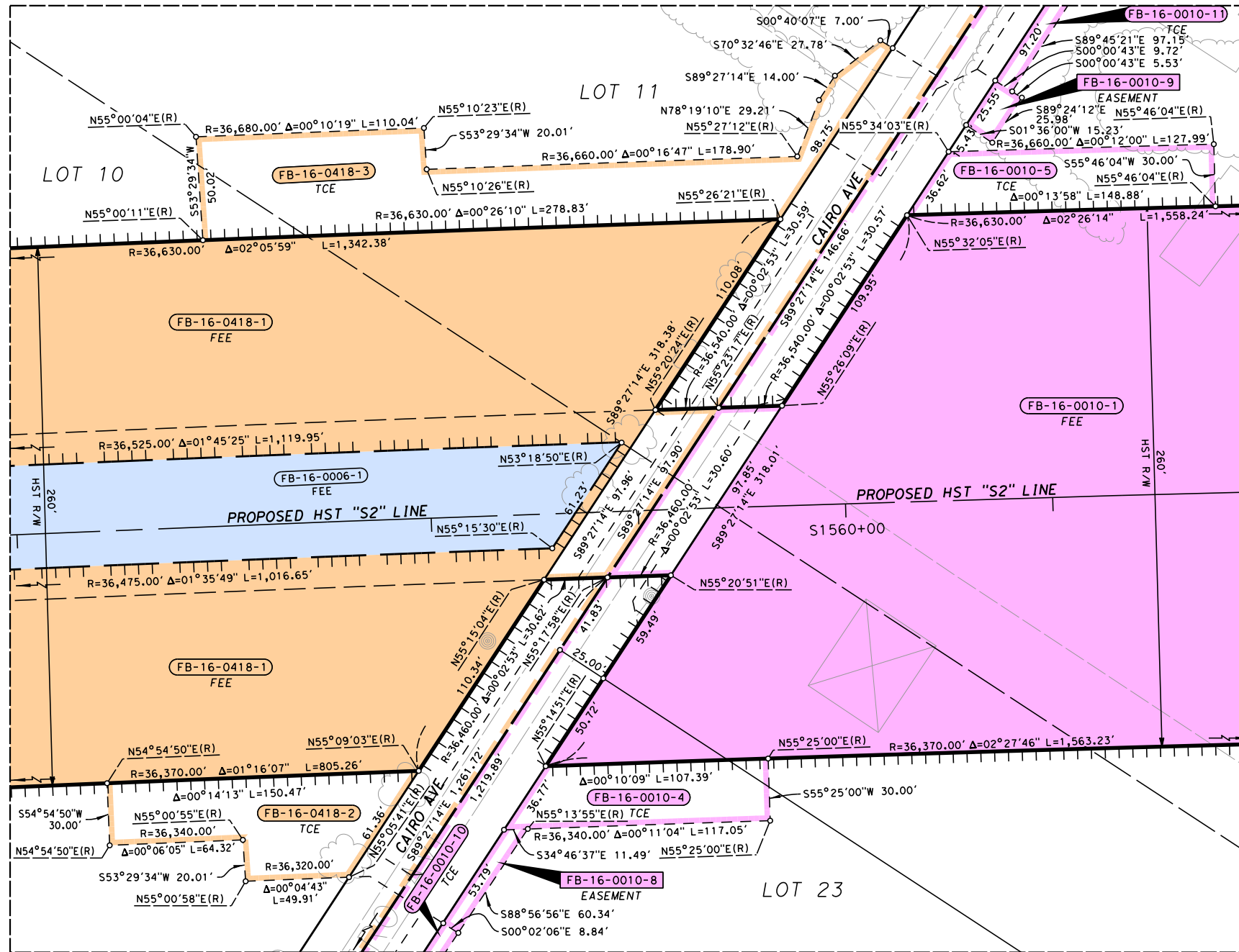
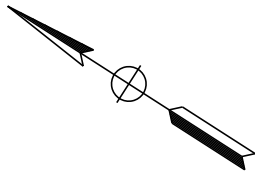
Cairo Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS
03-14-17	R. HERNANDEZ	REMOVED 0006-2, 0010-2	-	-	-	-	-	-
11-21-17	R. HERNANDEZ	ADDED 0010-8, 9, 10, 11, REVISED 0418-3	-	-	-	-	-	-



DETAIL "A"

(SEE SHEET RW-M4003-2K1 FOR LOCATION)
NO SCALE

PARCEL#	TITLE CODE	GRANTOR	AREAS (square feet or as noted)				REMARKS
			TOTAL	REQUIRED (UF)	EXCESS (UF)	REMAINDER	
FB-16-0006-1	F	Stanley A. Crawshaw, Et al					See Map RW-M4002-2K1
FB-16-0010-1	F	Sharon Lynne Morton, Trst					See Map RW-M4003-2K1
FB-16-0010-4	TCE	Sharon Lynne Morton, Trst		3,539			
FB-16-0010-5	TCE	Sharon Lynne Morton, Trst		4,153			
FB-16-0010-8	E	Sharon Lynne Morton, Trst		519			PG&E-ELEC ESMT
FB-16-0010-9	E	Sharon Lynne Morton, Trst		393			PG&E-ELEC ESMT
FB-16-0010-10	TCE	Sharon Lynne Morton, Trst					SEE MAP RW-M4003-2K1
FB-16-0010-11	TCE	Sharon Lynne Morton, Trst					SEE MAP RW-M4003-2K1
FB-16-0418-1	F	Stanley A. Crawshaw, Et al					See Map RW-M4002-2K1
FB-16-0418-2	TCE	Stanley A. Crawshaw, Et al		5,339			
FB-16-0418-3	TCE	Stanley A. Crawshaw, Et al		11,759			

GRANTOR NOTES	
①	Areas shown exclude underlying fee in the adjoining public way. Ac=acres, SF=Square Feet
②	Indicates Underlying Fee (UF) Area
	Indicates Indeterminate UF
	TITLE CODES:
	F=Fee
	E=Easement (Ease)
	TCE=Temp Construction Ease
	F2X=Fee converted to Excess
	X2F=Excess converted to Fee
	F2E=Fee converted to Ease
	E2F=Ease converted to Fee
	O=Other (see Remarks)

NOTES	
Horizontal Datum: NAD83 (NRS52007), California Coordinate System of 1983. Coordinates and bearing are CCS83, Zone 4, Epoch 2007.00. Distances and stationing are grid distances. Divide by 0.999938170 to obtain ground level distances. All distances are in feet (U.S. Survey Feet).	
LEGEND	
Access Prohibited	Access Superseded
Access Opening (Private)	Existing R/W Superseded
(R) Radial Bearing	
(T) Total Distance	
Section Corner	
Found Monument as noted	
Calculated point	
(Not monument symbol)	
Title to State	
Required for Others	
HST R/W	High-Speed Train R/W

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD					
RIGHT OF WAY APPRAISAL MAP RW-M4003-2K1-A					
NO SCALE					
CONTRACT	COUNTY	PM	DWG No.	SHEET NO.	TOTAL SHEETS
CP2-3	KIN		RW-M4003-2K1-A	3-A	31

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

GORDON N. ANDERSON
PROFESSIONAL LAND SURVEYOR
10-14-2016
DATE

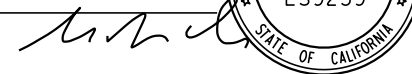


EXHIBIT "A"
LEGAL DESCRIPTION

PARCEL FB-16-0006-1 (FEE)

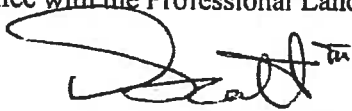
For rail purposes, that portion of land situated in the County of Kings, State of California, being a portion of that certain parcel described in Document No. 1990-019328, recorded December 20, 1990, Official Records of said County, said portion described as follows:

COMMENCING at the northwesterly corner of Lot 10, as shown on that certain "MAP OF SECTIONS 20, 21, 22 & 23, TOWNSHIP 17 SOUTH, RANGE 22 EAST, M.D.B. AND M., filed in Book 1 of Licensed Surveyor Plats, page 67, Records of said County; thence South 00°33'21" West 385.41 feet along the westerly line of said Lot 10 to the **POINT OF BEGINNING**, said point also being the beginning of a non-tangent curve concave southwesterly and having a radius of 36,525.00 feet (a radial line from the radius point to the beginning of said curve bears North 53°33'25" East); thence southeasterly 1,119.95 feet along said curve through a central angle of 01°45'25" to the northerly line of Cairo Avenue (30 feet half width) as shown on that certain "PARCEL MAP", filed in Book 13 of Parcel Maps at Page 11, Records of said County; thence North 89°27'14" East 61.23 feet along last said line to the beginning of a non-tangent curve concave southwesterly and having a radius of 36,475.00 feet (a radial line from the radius point to the beginning of said curve bears North 55°15'30" East); thence northwesterly 1,016.65 feet along said curve through a central angle of 01°35'49" to said westerly line of Lot 10; thence along said westerly line North 00°33'21" East 83.18 feet to the **POINT OF BEGINNING**.

The bearings and distances used in the above description are based on the California Coordinate System 1983, Zone 4, as shown on Record of Survey, Book 58, pages 71 to 72, Epoch 2007.00. Multiply distances shown above by 1.000061834 to obtain ground level distances.

This real property description has been prepared by me, or under my direction, in conformance with the Professional Land Surveyors' Act.

Signature



Dan S. Scott III, PLS 7840

12/8/14
Date



EXHIBIT B-1

Locations Map

9th Avenue

Dragados Flatiron Joint Venture

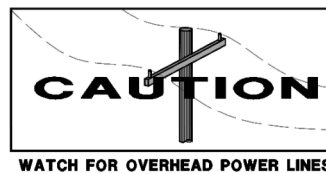
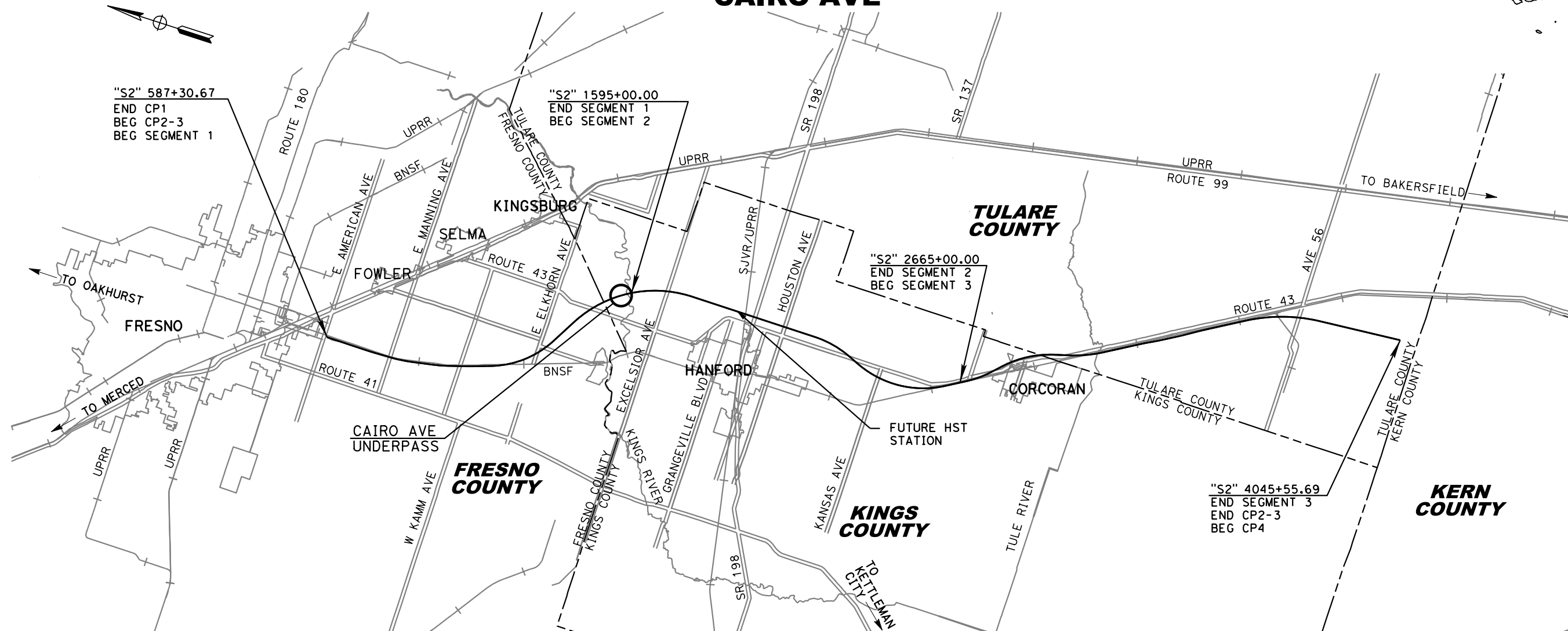
1775 Park Street Suite 75

Selma, CA 93662



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

RFC SUBMITTAL
CALIFORNIA HIGH-SPEED TRAIN PROJECT
SIERRA SUBDIVISION
SEGMENT 1 / CONSTRUCTION PACKAGE 2-3
CIVIL ROADWAY
CAIRO AVE



Know what's below.
Call before you dig.

PROJECT LOCATION MAP



CONTRACT No. **HSR13-57**

DATE: 04/25/2018

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iplotdrv.mpl

CAHSR RFC_SIGNED.tbl

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EXHIBIT B-2

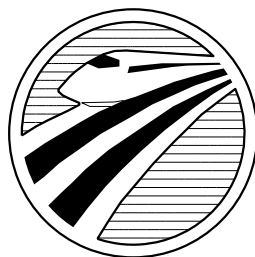
Locations Map

Cairo Avenue

Dragados Flatiron Joint Venture

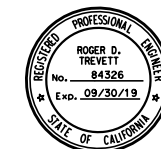
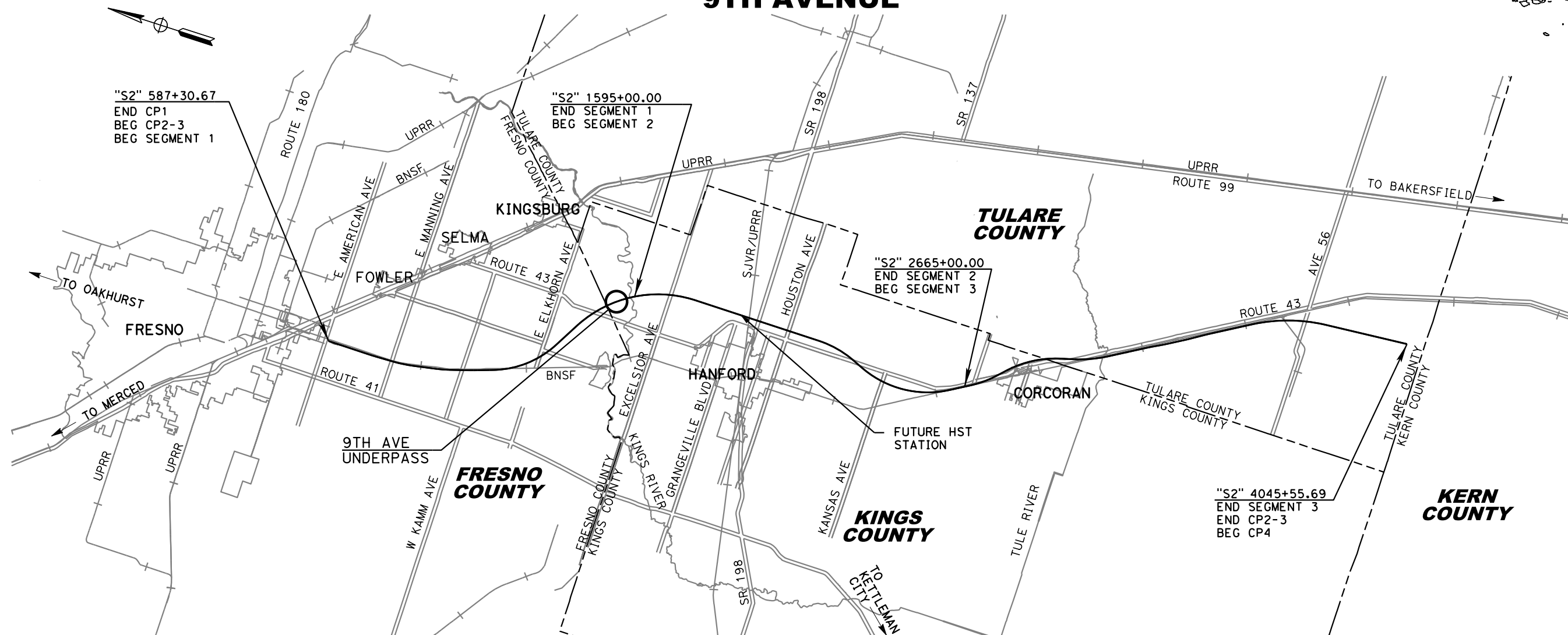
1775 Park Street Suite 75

Selma, CA 93662



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

RFC SUBMITTAL
CALIFORNIA HIGH-SPEED TRAIN PROJECT
SIERRA SUBDIVISION
SEGMENT 1 / CONSTRUCTION PACKAGE 2-3
CIVIL ROADWAY
9TH AVENUE



Know what's below.
Call before you dig.

PROJECT LOCATION MAP



CONTRACT No. **HSR13-57**

DATE: 03/30/2018

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CAHSR RFC_SIGNED.tbl

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DC1APP23\$

EXHIBIT C-1

Vicinity Map

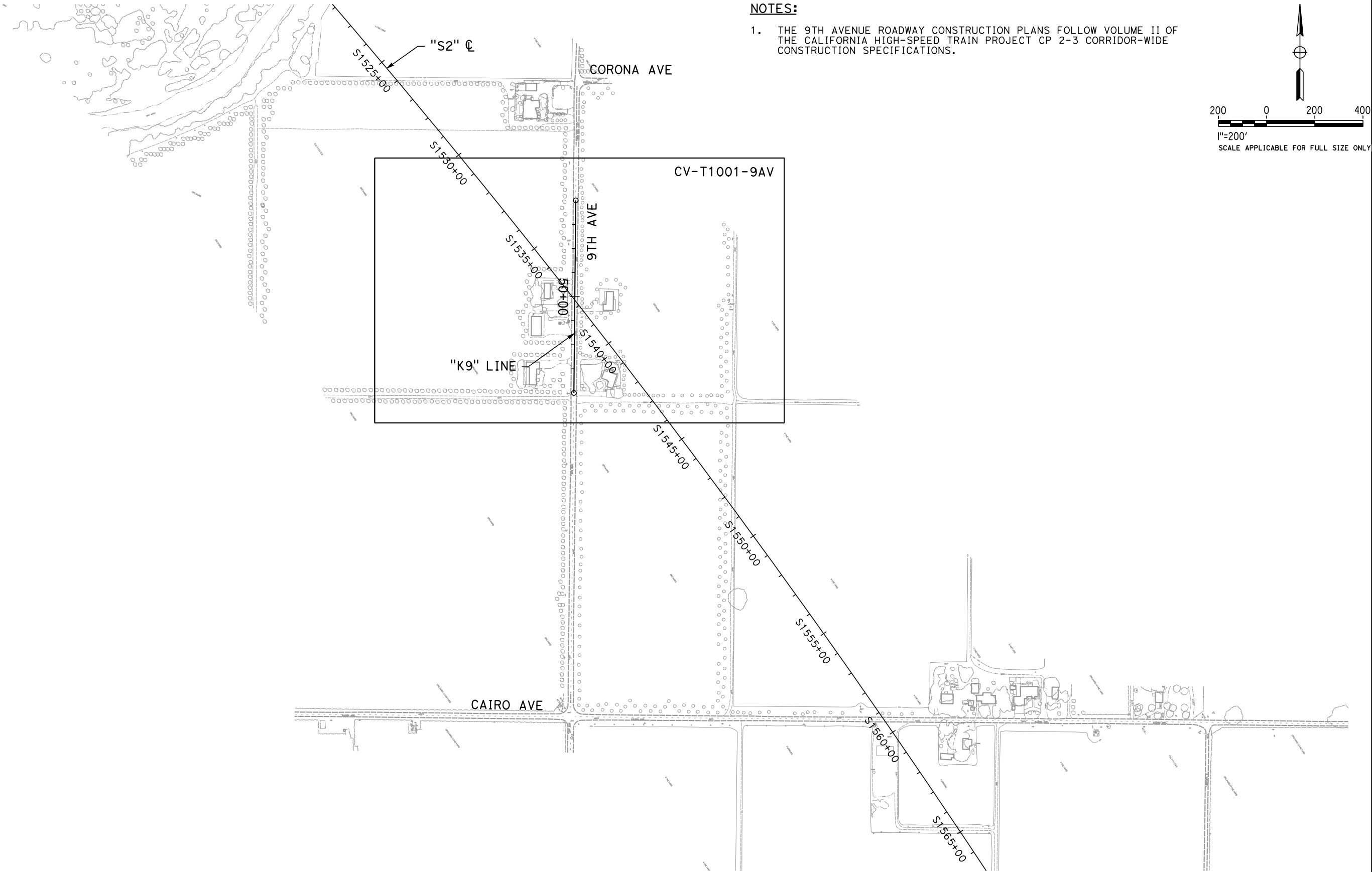
9th Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

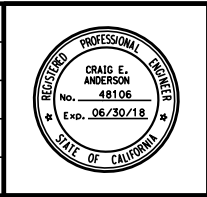
Selma, CA 93662

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iplotdrv-m.plt
CAHSR_PFC_SIGNED.tbl
4/20/2018 11:02:50 AM
DC1APP23\$



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. GRAVES
DRAWN BY A. GRAVES
CHECKED BY R. BAUM
IN CHARGE R. TREVETT
DATE 03/30/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
KEY MAP
9TH AVE

CONTRACT NO. HSR 13-57
DRAWING NO. GE-B0102-9AV
SCALE AS SHOWN
SHEET NO. OF

EXHIBIT C-2

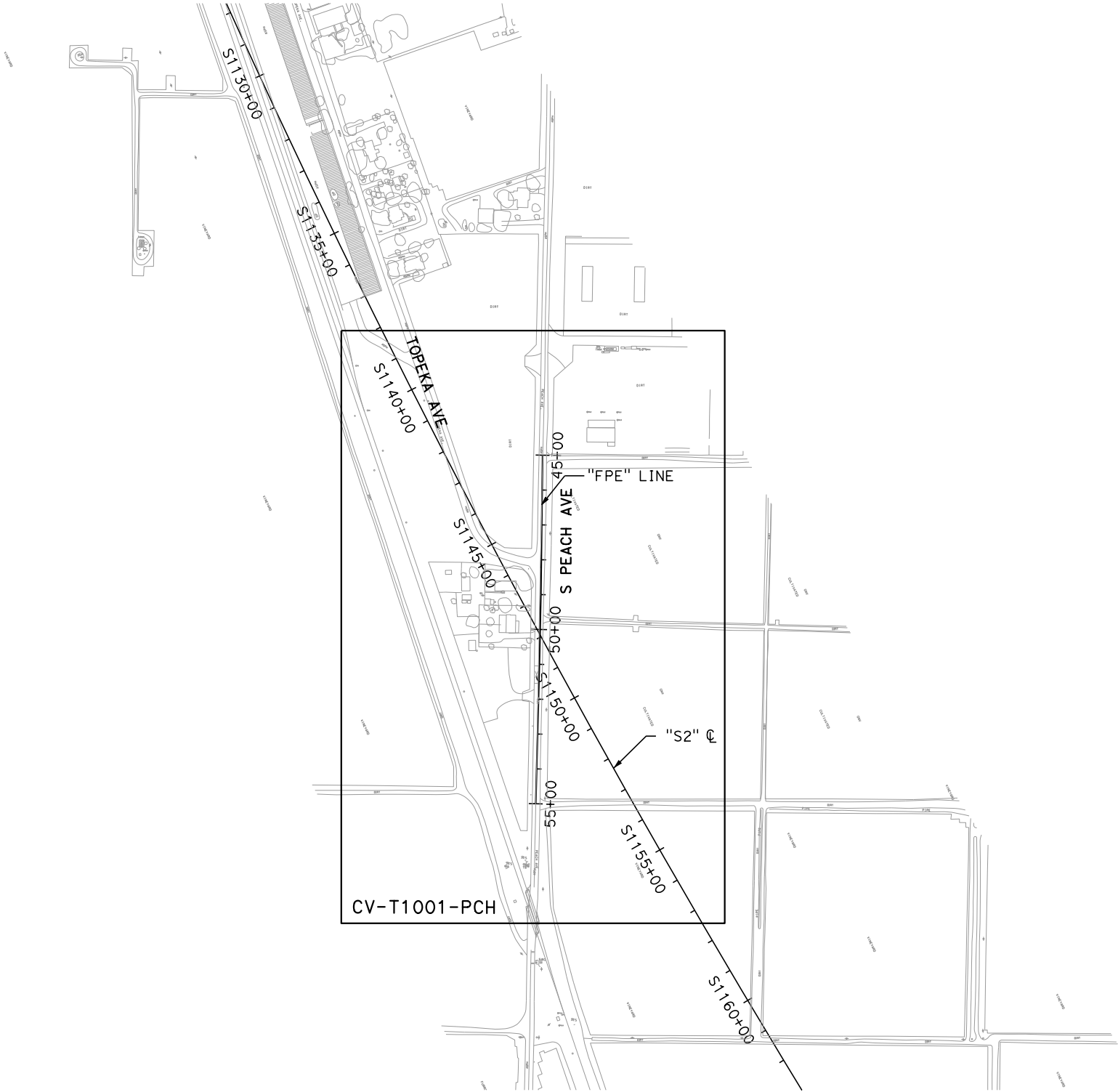
Vicinity Map

Cairo Avenue

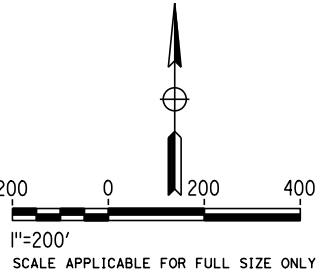
Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662



KEY MAP



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
D. SPIHLMANN
DRAWN BY
D. SPIHLMANN
CHECKED BY
A. LEDBETTER
IN CHARGE
J. MENG
DATE
10/13/2017



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
KEY MAP
S PEACH AVE

CONTRACT NO.	HSR 13-57
DRAWING NO.	GE-B0102-PCH
SCALE	AS SHOWN
SHEET NO.	OF

EXHIBIT D-1

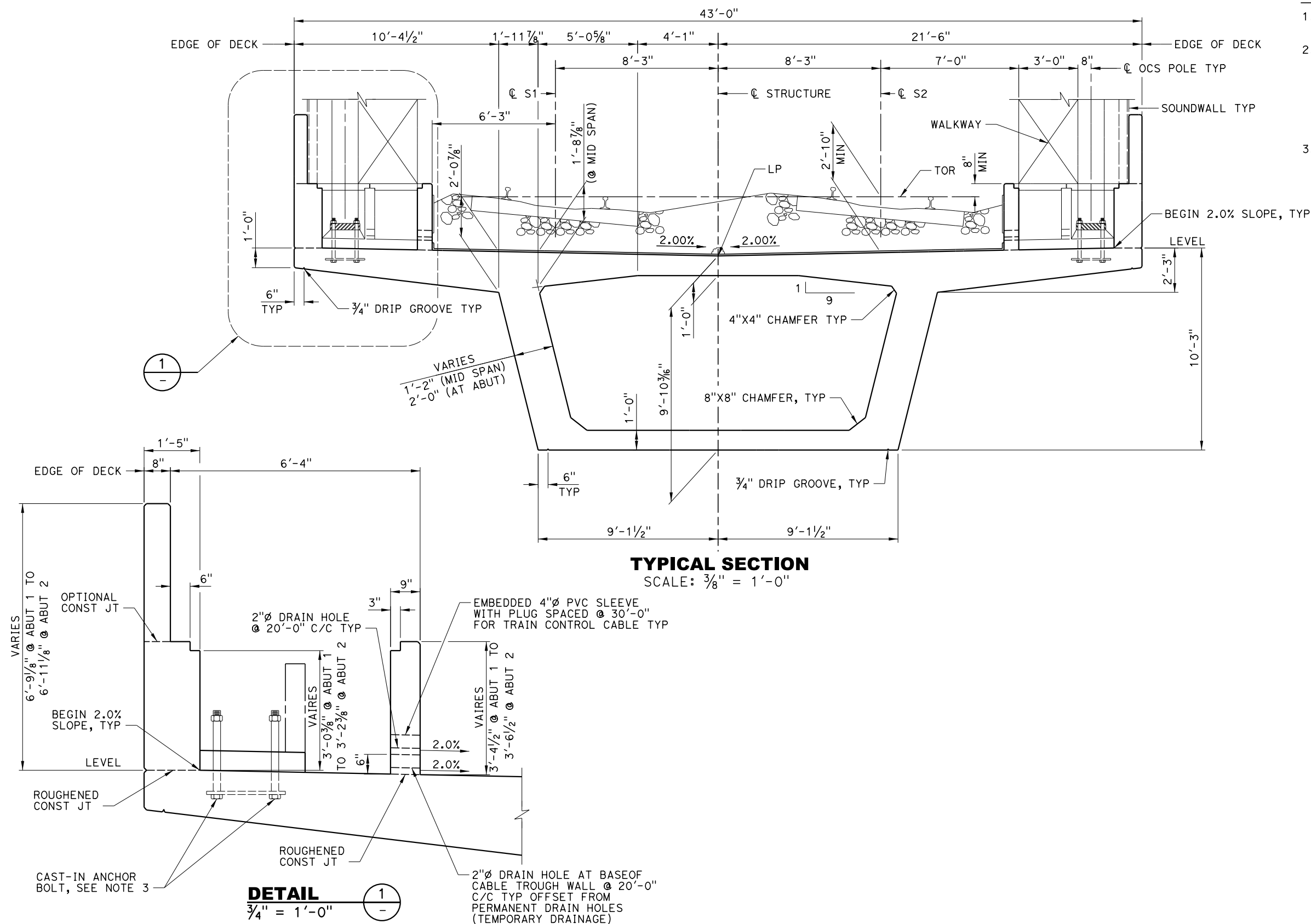
Underpass Structural Drawings

9th Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662



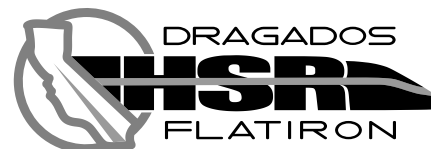
NOTES:

1. POST-TENSIONING ANCHORS AND TENDONS NOT SHOWN. SEE POST-TENSIONING LAYOUT SHEETS FOR DETAILS.
2. THE FOLLOWING ITEMS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY AND ARE NOT INCLUDED IN THE CONTRACT:
 - A. OCS POLES, BASE PLATES AND GROUT PADS.
 - B. CABLE TROUGH PRE-CAST COVERS, INTERMEDIATE WALLS, SOUND WALLS AND BASE SLABS.
3. FOR OCS CONNECTION DETAILS, SEE DRAWING NO. ST-J5018-9AV.

FID: S-AS-215.7

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. LEE
DRAWN BY A. PRICE
CHECKED BY E. KANOPKIN
IN CHARGE G. FROMM
DATE 02/20/2018



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3**

9TH AVENUE AERIAL STRUCTURE
GIRDER SECTION

CONTRACT NO.	HSR 13-57
DRAWING NO.	ST-J5008-9AV
SCALE	AS SHOWN
SHEET NO.	16 OF 43

EXHIBIT D-2

Underpass Structural Drawings

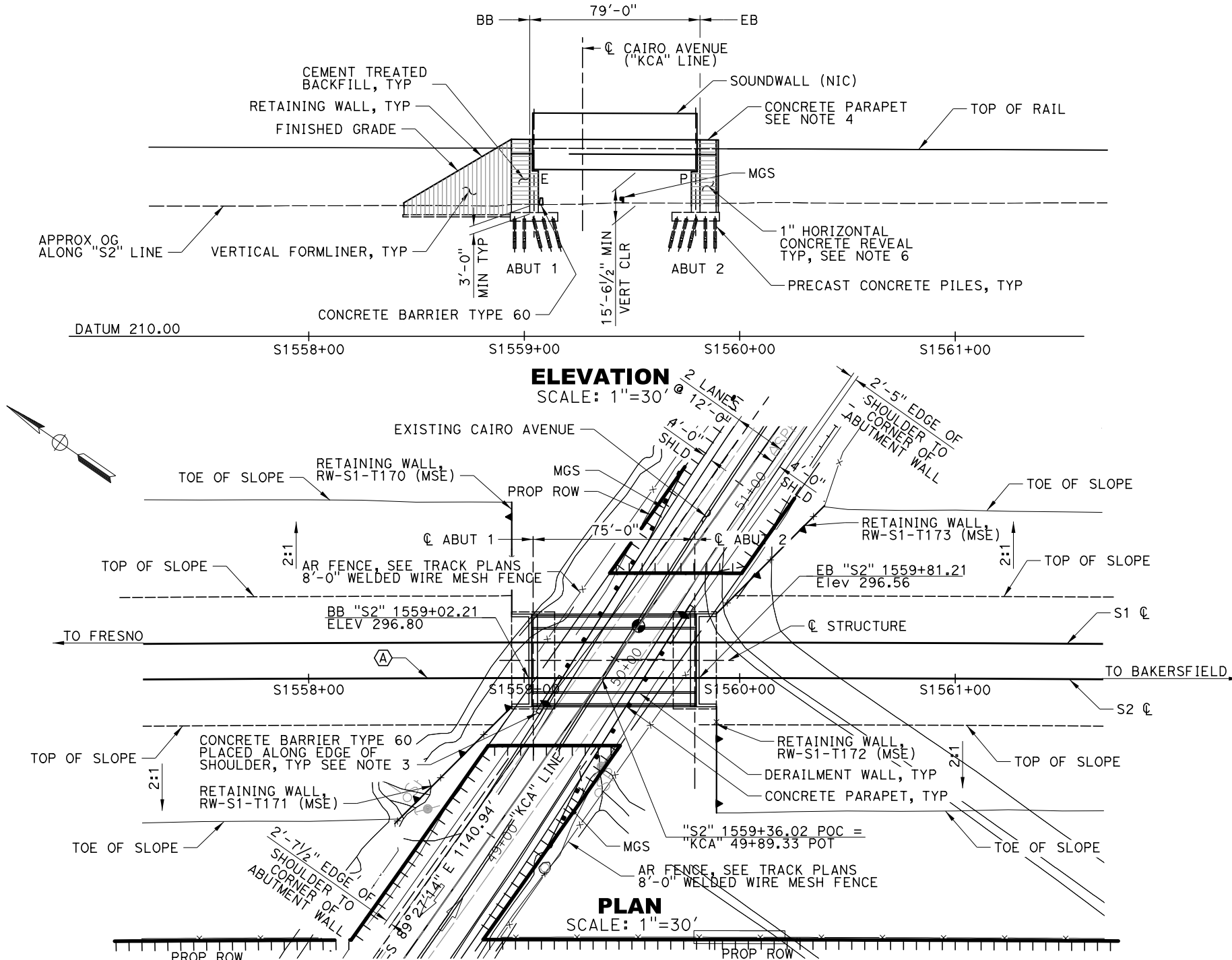
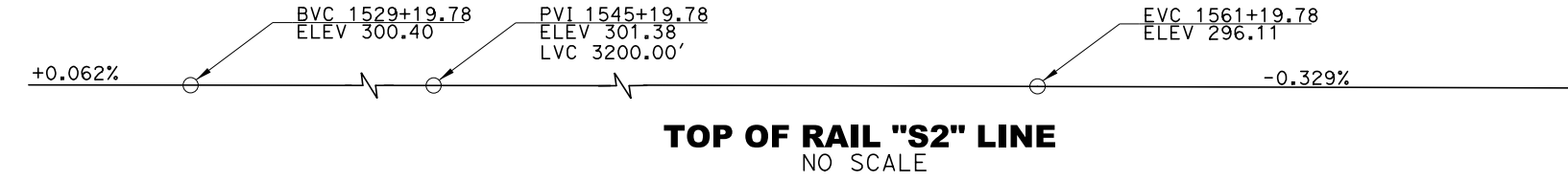
Cairo Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

c:\pwworking\ndai\whitesj\1357-235-ST-J1002-CAI.dgn
CHSR_PDF_half_black.plt
CAHSR_PDF_half_black.plt
5/29/2018 3:29:33 PM
Whitesj



NOTES:

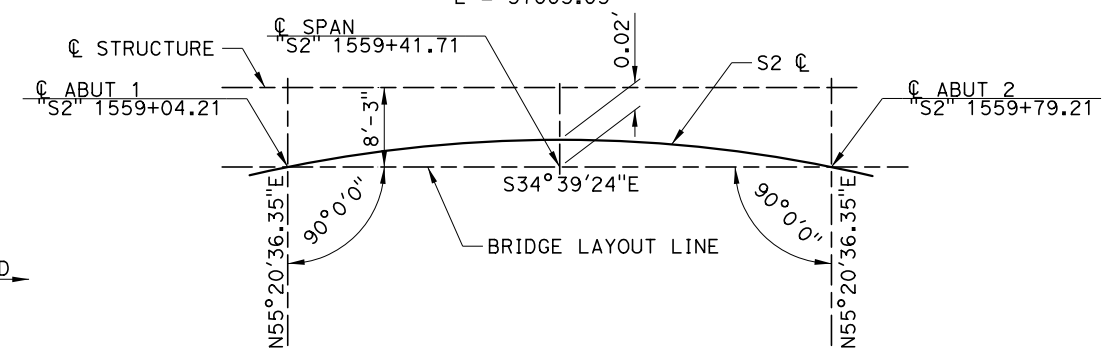
1. FOR TYPICAL SECTION SEE GENERAL PLAN AND ELEVATION SHEET 2 OF 2.
2. FOR UTILITY INFORMATION, SEE COMPOSITE UTILITY PLANS.
3. A TYPE 60 BARRIER IS PLACED AT THE EDGE OF SHOULDERS AND THROUGH TRANSITION LENGTHS. SEE CAIRO AVENUE ROADWAY SHEETS. SEE CALTRANS STANDARD PLANS A76A FOR BARRIER DETAILS.
4. APPLY KINEMATIC DOT FORMLINER TO CONCRETE PARAPET. SEE DRAWING NO. ST-J5029-CAI, AND ST-J5030-CAI.
5. FOR RETAINING WALL LAYOUT, SEE SEGMENT 1 SOUTH TRACK PLANS. FOR RETAINING WALL DETAILS, SEE GENERAL PACKAGE.
6. FOR ABUTMENT AND WINGWALL AESTHETICS DETAILS, SEE DRAWING NO. ST-J5029-CAI.
7. FOR LIMITS OF SCOUR PROTECTION AROUND APPROACH AND STRUCTURE, SEE SOUTH HALF SEGMENT 1 TRACK PLANS.

LEGEND:

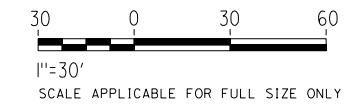
- INDICATES POINT OF MINIMUM VERTICAL CLEARANCE
- ➔ INDICATES DIRECTION OF TRAFFIC
- BB BEGIN BRIDGE
- EB END BRIDGE
- E CONNECTION IS FREE TO MOVE LONGITUDINALLY
- P PINNED CONNECTION
- MGS MIDWEST GUARDRAIL SYSTEM

CURVE DATA

Ⓐ "S2" LINE
R = 36494.77'
Δ = 58° 05' 37.46"
T = 20268.43'
L = 37003.03'



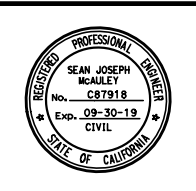
BRIDGE GEOMETRICS
NO SCALE



FID: S-AS-216.1

REV	DATE	BY	CHK	APP	DESCRIPTION

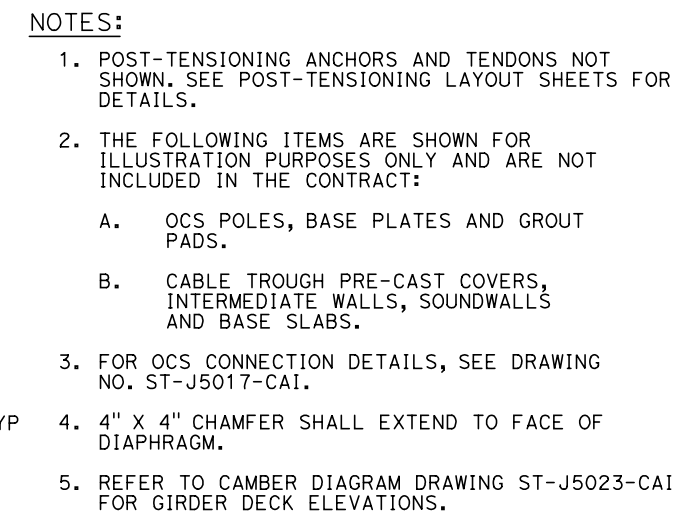
DESIGNED BY
S. MCAULEY
DRAWN BY
D. HALL
CHECKED BY
K. LEE
IN CHARGE
R. TREVETT
DATE
04/20/2018



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3**

CAIRO AVENUE AERIAL STRUCTURE
GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

CONTRACT NO. HSR 13-57
DRAWING NO. ST-J1002-CAI
SCALE AS NOTED
SHEET NO. 5 OF 42



TYPICAL
SCALE

VARIES
6'-9 1/8" @ ABUT 1 TO
6'-10 7/8" @ ABUT 2

EDGE OF DECK

1'-5"

8"

6'-4"

6"

2"Ø DRAIN HOLE
@ 20'-0" C-C TYP
(PERMANENT DRAINAGE)

3'-6"

OPTIONAL CONST JT

2 3/4" TYP

9"

3"

EMBEDDED 4"Ø PVC SLEEVE
WITH PLUG SPACED @ 30'-0"
FOR TRAIN CONTROL CABLE TYP

BEGIN 2.0%
SLOPE, TYP

LEVEL

VARIES
3'-0 3/8" @ ABUT 1
TO 3'-2 1/8" @ ABUT 2

VARIES
3'-4 1/2" @ ABUT 1 TO
3'-6 1/4" @ ABUT 2

2.0%

2.0%

6"

ROUGHENED CONST JT

ROUGHENED CONST JT

CAST-IN ANCHOR
BOLTS, OCS POLE
PEDESTAL NOT SHOWN
FOR CLARITY. SEE NOTE 3

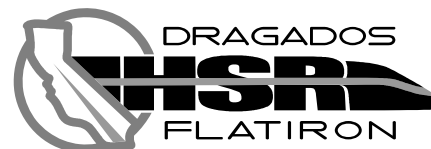
DETAIL
3/4" = 1'-0"

1
-

2"Ø DRAIN HOLE AT BASE OF
CABLE TROUGH WALL @ 20'-0"
C-C TYP. STAGGER LOCATION W/
PERMANENT DRAIN HOLES
(TEMPORARY DRAINAGE)

FID: S-AS-216.1[illegible]

DESIGNED BY	S. MCAULEY
DRAWN BY	A. PRICE
CHECKED BY	S. HENNING
IN CHARGE	R. TREVETT
DATE	04/20/2018



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3**

CAIRO AVENUE AERIAL STRUCTURE
GIRDER SECTION

CONTRACT NO.	HSR 13-57
DRAWING NO.	ST-J5008-CAI
SCALE	AS SHOWN
SHEET NO.	16 OF 42

EXHIBIT E-1

Layout/Profile Plan Drawings

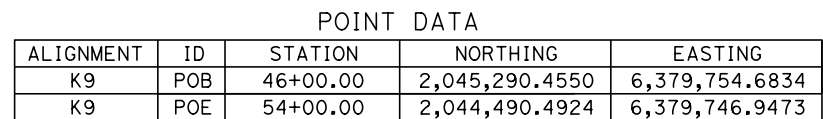
9th Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

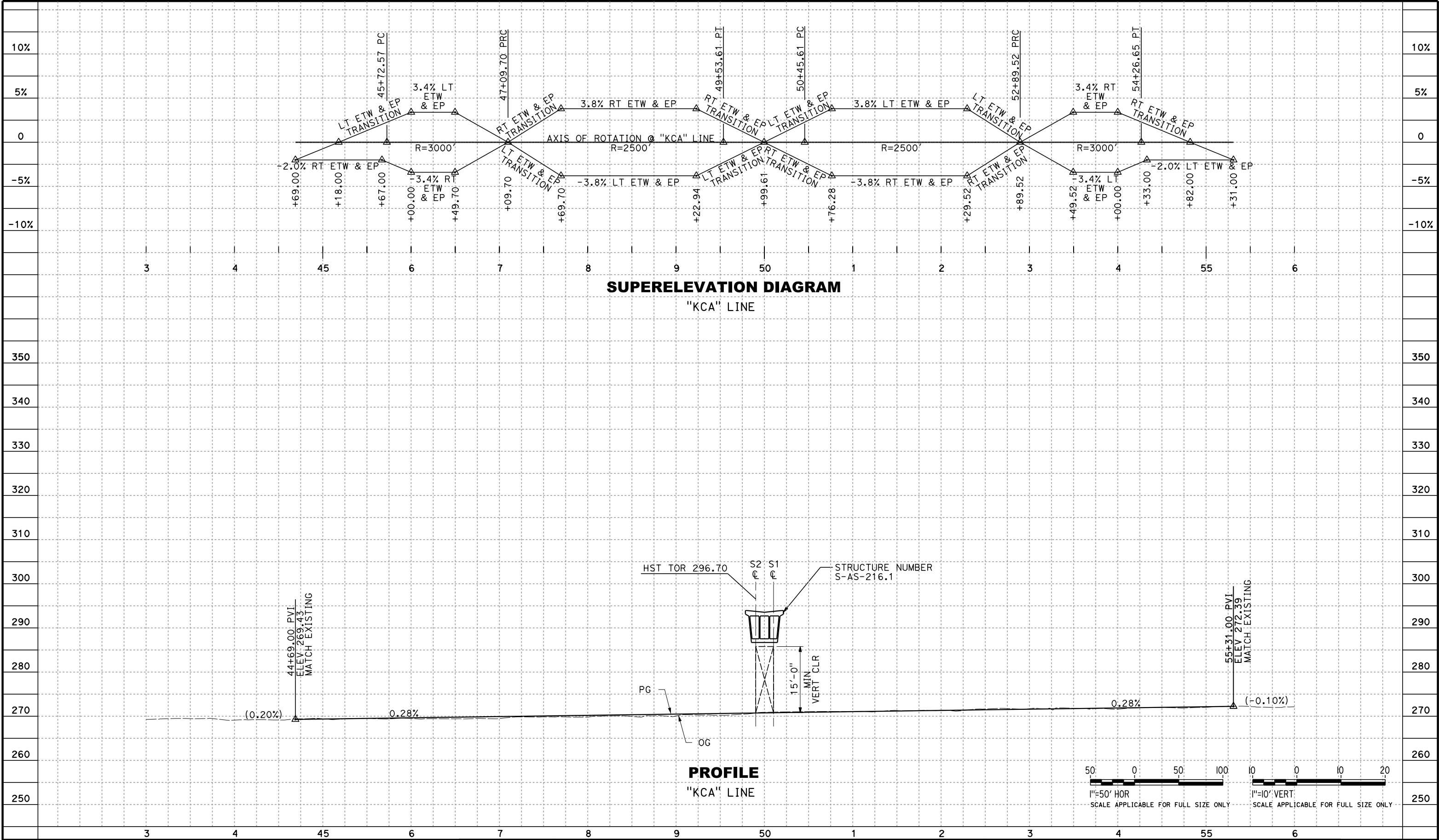
Selma, CA 93662

1. SEE SHEET CV-B0200-9AV FOR ROADWAY TYPICALS.
2. SEE SHEET UT-C1069 IN SOUTH TRACK GUIDEWAY PACKAGE FOR UTILITY RELOCATIONS.
3. SEE CALTRANS STD. PLAN A76B FOR CONCRETE BARRIER TYPE 60 END ANCHORAGE DETAILS. INCLUDE BARRIER WALL FOOTING, AS SHOWN IN A76B, FOR THE ENTIRE LENGTH OF THE WALL.



CONTRACT NO.	HSR 13-57
DRAWING NO.	CV-T1001-9AV
SCALE	AS SHOWN
SHEET NO.	OF

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DC1APP23\$



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
K. OLSON
DRAWN BY
K. OLSON
CHECKED BY
D. SPIHLMANN
IN CHARGE
R. TREVETT
DATE
04/25/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
GRADE SEPARATION PROFILE
CAIRO AVE

CONTRACT NO.
HSR 13-57
DRAWING NO.
CV-T1002-CAI
SCALE
AS SHOWN
SHEET NO.
OF

EXHIBIT E-2

Layout/Profile Plan Drawings

Cairo Avenue

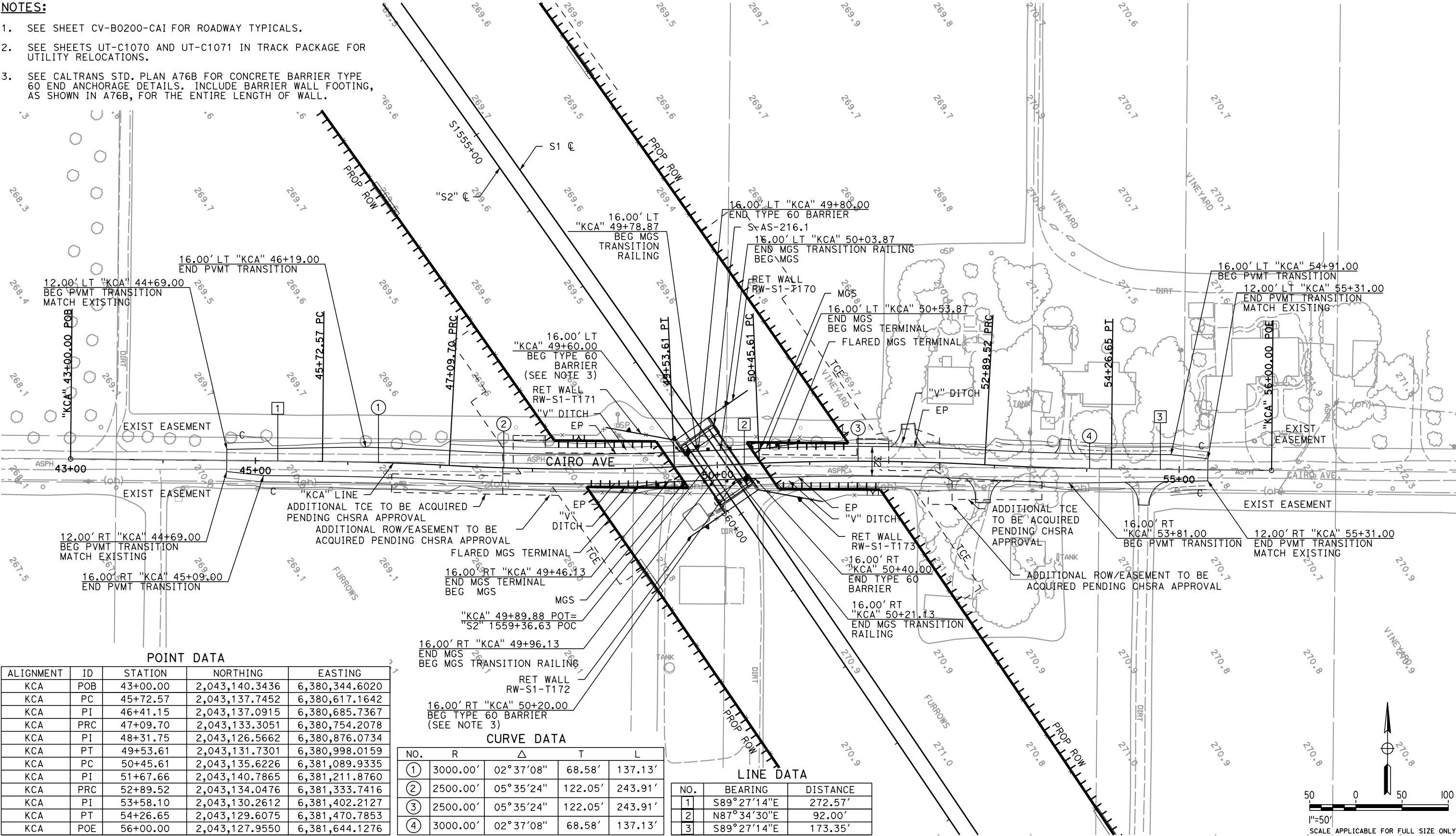
Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

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- NOTES:**
- SEE SHEET CV-B0200-CAI FOR ROADWAY TYPICALS.
 - SEE SHEETS UT-C1070 AND UT-C1071 IN TRACK PACKAGE FOR UTILITY RELOCATIONS.
 - SEE CALTRANS STD. PLAN A76B FOR CONCRETE BARRIER TYPE 60 END ANCHORAGE DETAILS. INCLUDE BARRIER WALL FOOTING, AS SHOWN IN A76B, FOR THE ENTIRE LENGTH OF WALL.



POINT DATA				
ALIGNMENT	ID	STATION	NORTHING	EASTING
KCA	POB	43+00.00	2,043,140.3436	6,380,344.6020
KCA	PC	45+72.57	2,043,137.7452	6,380,617.1642
KCA	PI	46+41.15	2,043,137.0915	6,380,685.7367
KCA	PRC	47+09.70	2,043,133.3051	6,380,754.2078
KCA	PI	48+31.75	2,043,126.5662	6,380,876.0734
KCA	PT	49+53.61	2,043,131.7301	6,380,998.0159
KCA	PC	50+45.61	2,043,135.6226	6,381,089.9335
KCA	PI	51+67.66	2,043,140.7865	6,381,211.8760
KCA	PRC	52+89.52	2,043,134.0476	6,381,333.7416
KCA	PI	53+58.10	2,043,130.2612	6,381,402.2127
KCA	PT	54+26.65	2,043,129.6075	6,381,470.7853
KCA	POE	56+00.00	2,043,127.9550	6,381,644.1276

CURVE DATA				
NO.	R	Δ	T	L
①	3000.00'	02° 37' 08"	68.58'	137.13'
②	2500.00'	05° 35' 24"	122.05'	243.91'
③	2500.00'	05° 35' 24"	122.05'	243.91'
④	3000.00'	02° 37' 08"	68.58'	137.13'

LINE DATA		
NO.	BEARING	DISTANCE
1	S89° 27' 14" E	272.57'
2	N87° 34' 30" E	92.00'
3	S89° 27' 14" E	173.35'

REV	DATE	BY	CHK	APP	DESCRIPTION

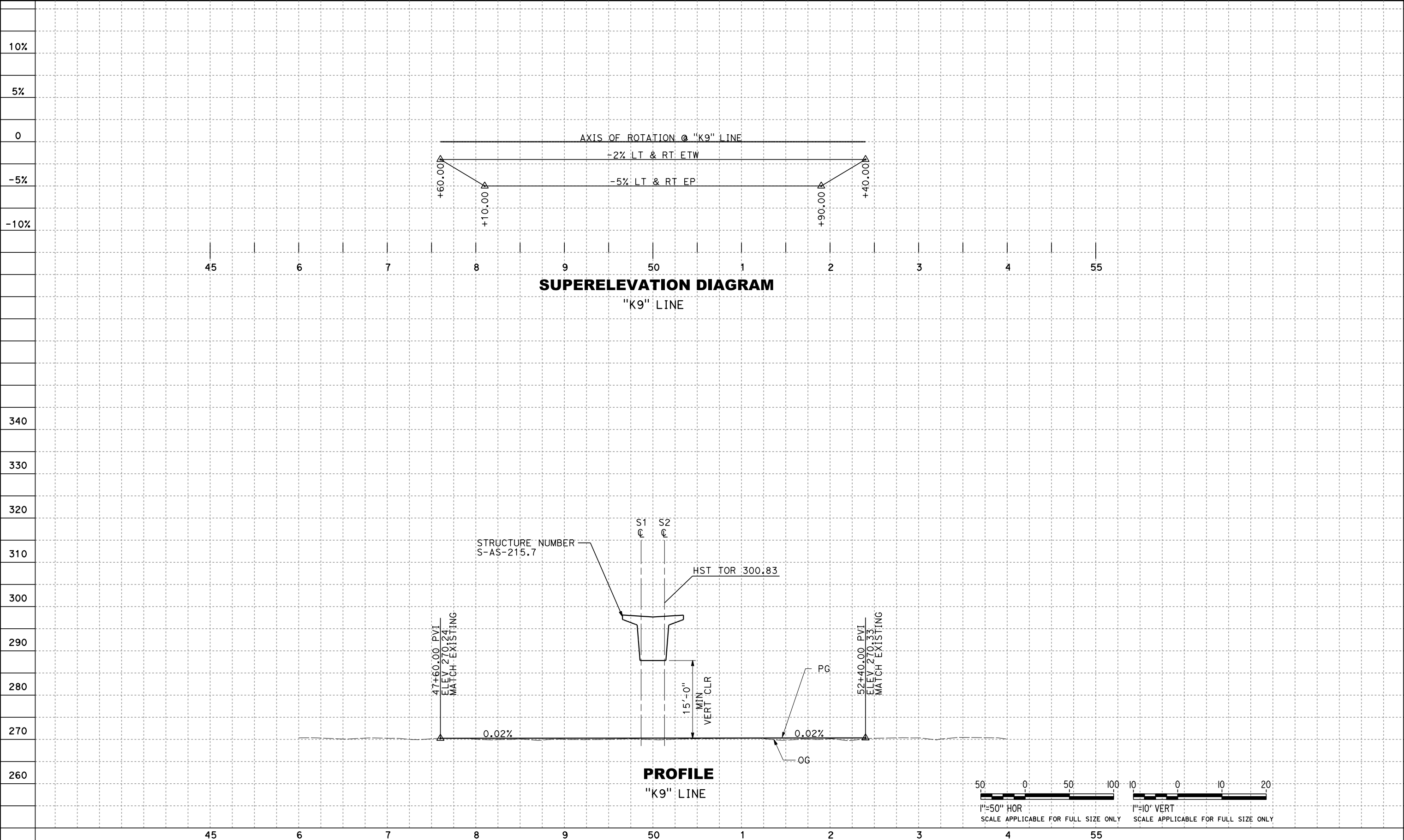
DESIGNED BY
K. OLSON
DRAWN BY
K. OLSON
CHECKED BY
D. SPIHLMANN
IN CHARGE
R. TREVETT
DATE
04/25/2018



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3**
ROADWAY SEGMENT 1
GRADE SEPARATION LAYOUT
CAIRO AVE

CONTRACT NO.
HSR 13-57
DRAWING NO.
CV-T1001-CAI
SCALE
AS SHOWN
SHEET NO.
OF

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DC1APP23\$



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. GRAVES
DRAWN BY
A. GRAVES
CHECKED BY
R. BAUM
IN CHARGE
R. TREVETT
DATE
03/30/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
GRADE SEPARATION PROFILE
9TH AVE

CONTRACT NO.
HSR 13-57
DRAWING NO.
CV-T1002-9AV
SCALE
AS SHOWN
SHEET NO.
OF

EXHIBIT F-1

Motorist Information Page

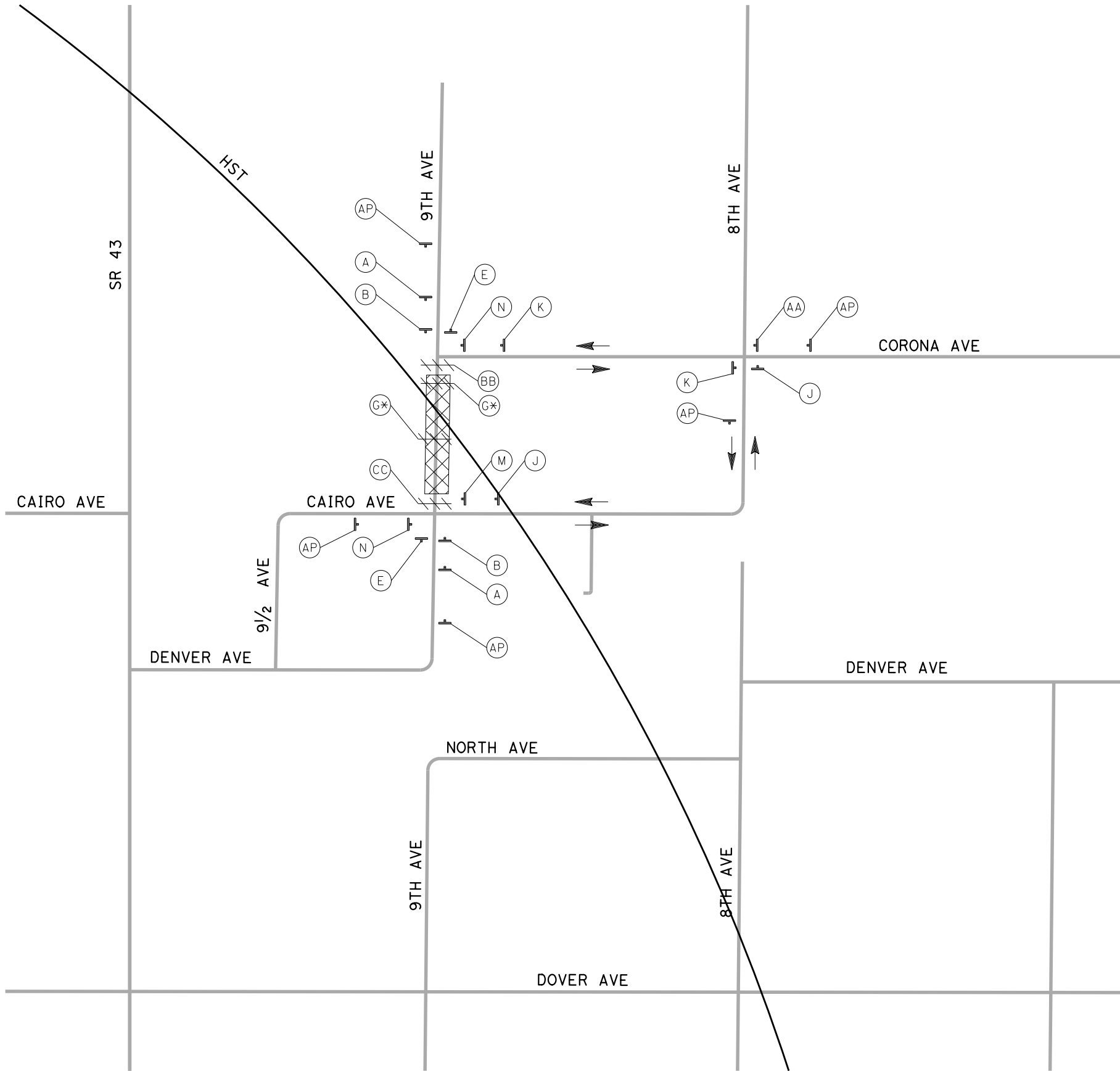
9th Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

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NOTES:

- SEE SHEETS CV-15201-9AV AND CV-15202-9AV FOR NOTES, LEGEND, AND STATIONARY MOUNTED CONSTRUCTION AREA SIGNS NOT SHOWN.
- WITH THE APPROVAL OF THE LOCAL JURISDICTION, SIGNS IN CONFLICT WITH DETOUR SHALL BE COVERED OR REMOVED PRIOR TO RAMP/ROAD CLOSURE AND RESTORED TO ORIGINAL LOCATION/CONDITION UPON COMPLETION OF CLOSURE.
- TEMPORARY CLOSURES AND DETOURS SHALL BE COORDINATED WITH THE LOCAL JURISDICTIONS PRIOR TO IMPLEMENTATION.
- SEE CALIFORNIA MUTCD PART 6 FOR GUIDANCE NOT SHOWN.
- CLOSURE OF CAIRO AVE DURING CONSTRUCTION SHALL BE COORDINATED WITH THE LOCAL JURISDICTION.

CONSTRUCTION STAGING NOTES

- CLOSE 9TH AVE BETWEEN CORONA AVE AND CAIRO AVE AND CONSTRUCT NEW BRIDGE AND ROAD IMPROVEMENTS.
- MAINTAIN LOCAL ACCESS TO PROPERTIES ALONG 9TH AVE AT ALL TIMES DURING CONSTRUCTION.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

NEW SIGN NO. (THIS SHEET ONLY)	NEW SIGN NO. (SEE CV-15201-9AV & CV-15202-9AV)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
AA	F	1 - 4" x 6"	9th Ave South
	J		DETOUR (LEFT ARROW)
BB *	G	MOUNT SIGNS ON TYPE III BARRICADE	ROAD CLOSED TO THRU TRAFFIC
	C		DETOUR (LEFT ARROW)
CC *	G	MOUNT SIGNS ON TYPE III BARRICADE	ROAD CLOSED TO THRU TRAFFIC
	D		DETOUR (RIGHT ARROW)

* PROVIDE ADDITIONAL TYPE III BARRICADE AND SIGN G (R11-2) WHEN LOCAL ACCESS IS NO LONGER ALLOWED, SEE CALIFORNIA MUTCD PART 6 FOR GUIDANCE NOT SHOWN.

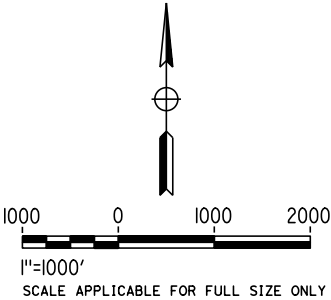
42"

24"

9th Ave South

6" UC
4.5" LC
SERIES E
BLACK/ORANGE

DETAIL SIGN F
"9TH AVE SOUTH"
(THIS SHEET ONLY)
NO SCALE



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. BRANCH
DRAWN BY H. MILLER
CHECKED BY R. BAUM
IN CHARGE R. TREVETT
DATE 03/30/2018



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3**
ROADWAY SEGMENT 1
MOTORIST INFORMATION PLAN
9TH AVE CLOSED


CONTRACT NO. HSR 13-57
DRAWING NO. CV-11001-9AV
SCALE AS SHOWN
SHEET NO. OF

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NOTES

1. CONTRACTOR MAY USE TEMPORARY SIGN STANDS DURING SHORT-TERM CLOSURES.
2. FEDERAL SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA SIGN CODE.
3. ADVANCE SIGNAGE TO BE IN ACCORDANCE WITH FEDERAL SIGN CODE, CALIFORNIA SIGN CODE, PIP, AND COUNTY STANDARDS.


LEGEND




TEMPORARY SIGN




TYPE III BARRICADE




ROAD CLOSED



EXISTING ROAD



EXISTING MINOR ROAD



DETOUR ROUTE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
(A)	W20-3		36 x 36	1 - 4" x 6"	ROAD CLOSED AHEAD
(B)	W20-2		36 x 36	1 - 4" x 6"	DETOUR AHEAD
(C)	M4-10 (L+)		48 x 18	*	DETOUR (LEFT ARROW)
(D)	M4-10 (R+)		48 x 18	*	DETOUR (RIGHT ARROW)
(E)	M4-8a		24 x 18	1 - 4" x 4"	END DETOUR
(F)		G7-1(CA)	VAR x 18	*	STREET NAME
(G)	R11-2		48 x 30	*	ROAD CLOSED
(H)	R11-3a		30 x 60	*	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
(I)	R11-4		30 x 60	*	ROAD CLOSED TO THRU TRAFFIC
(J)	M4-9 (L+)		30 x 24	1 - 4" x 6"	DETOUR (LEFT ARROW)
(K)	M4-9 (R+)		30 x 24	1 - 4" x 6"	DETOUR (RIGHT ARROW)
(L)	M4-9 (UP)		30 x 24	1 - 4" x 6"	DETOUR (UP ARROW)
(M)	R3-1		24 x 24	1 - 4" x 4"	(NO RIGHT TURN)
(N)	R3-2		24 x 24	1 - 4" x 4"	(NO LEFT TURN)
(O)	M4-9 (UP R+)		48 x 36	1 - 4" x 6"	DETOUR (UP RIGHT ARROW)
(P)	M4-9 (L+)		48 x 36	1 - 4" x 6"	DETOUR (LEFT ARROW)
(Q)	M3-1		24 x 12	*	NORTH
(R)	M3-2		24 x 12	*	EAST
(S)	M3-3		24 x 12	*	SOUTH

* NOT USED ON INDIVIDUAL POSTS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS (CONTINUED)

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
(T)	M3-4		24 x 12	*	WEST
(U)	M3-1		36 x 18	*	NORTH
(V)	M3-2		36 x 18	*	EAST
(W)	M3-3		36 x 18	*	SOUTH
(X)	M3-4		36 x 18	*	WEST
(Y)	M4-8		24 x 12	*	DETOUR
(Z)	M4-8		30 x 15	*	DETOUR
(AB)	M5-1 (R+)		21 x 15	*	(ADVANCE RIGHT ARROW)
(AC)	M5-1 (L+)		21 x 15	*	(ADVANCE LEFT ARROW)
(AD)	M5-2 (R+)		21 x 15	*	(ADVANCE UP RIGHT ARROW)
(AE)	M5-2 (L+)		21 x 15	*	(ADVANCE UP LEFT ARROW)
(AF)	M6-1 (R+)		21 x 15	*	(RIGHT ARROW)
(AG)	M6-1 (R+)		30 x 21	*	(RIGHT ARROW)
(AH)	M6-1 (L+)		21 x 15	*	(LEFT ARROW)
(AI)	M6-1 (L+)		30 x 21	*	(LEFT ARROW)
(AJ)	M6-2		30 x 21	*	(UP RIGHT ARROW)
(AK)	M6-3		21 x 15	*	(UP ARROW)
(AL)	M6-3		30 x 21	*	(UP ARROW)
(AM)		G28-2(CA)	21 x 18	*	(STATE ROUTE XX SHIELD)

REV	DATE	BY	CHK	APP	DESCRIPTION				

DESIGNED BY
M. BRADY

DRAWN BY
M. BRADY

CHECKED BY
P. BARNEY

IN CHARGE
R. TREVETT

DATE
03/30/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT

FB - CONSTRUCTION PACKAGE 2-3

ROADWAY SEGMENT 1

MOTORIST INFORMATION SIGN DETAILS

9TH AVE

CONTRACT NO.	HSR 13-57
DRAWING NO.	CV-15201-9AV
SCALE	NO SCALE
SHEET NO.	OF

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS (CONTINUED)

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
AN		G28-2(CA)	35 x 32	*	(STATE ROUTE XX SHIELD)
AO	W20-2		48 x 48	1 - 6" X 6"	DETOUR 1500 FT
AP	W20-1		36 x 36	1 - 4" X 6"	ROAD WORK AHEAD
AQ					NOT USED
AR	W20-3		48 x 48	1 - 6" X 6"	ROAD CLOSED 1000 FT
AS	W20-3		48 x 48	1 - 6" X 6"	ROAD CLOSED 500 FT
AT	W1-6(L+)		48 x 24	*	(LEFT ARROW)
AU	W1-6(R+)		48 x 24	*	(RIGHT ARROW)
AV	W1-7		48 x 24	*	(TWO DIRECTION ARROW)

* NOT USED ON INDIVIDUAL POSTS

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BRADY
DRAWN BY M. BRADY
CHECKED BY P. BARNEY
IN CHARGE R. TREVETT
DATE 03/30/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
MOTORIST INFORMATION SIGN DETAILS
9TH AVE

CONTRACT NO. HSR 13-57
DRAWING NO. CV-15202-9AV
SCALE NO SCALE
SHEET NO. OF

EXHIBIT F-2

Motorist Information Page

Cairo Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

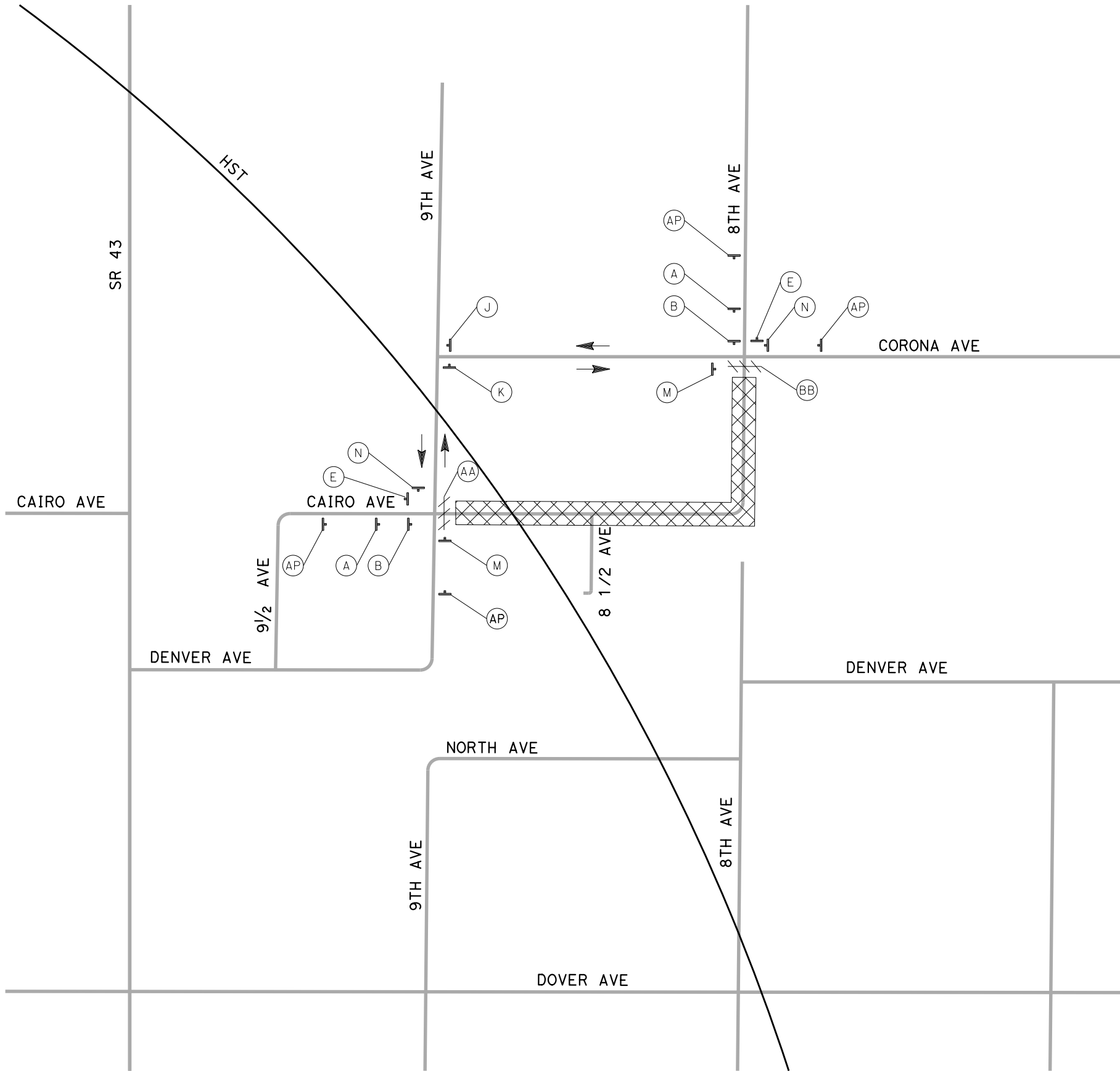
Selma, CA 93662

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NOTES:

1. SEE SHEETS CV-15201-CAI AND CV-15202-CAI FOR NOTES, LEGEND, AND STATIONARY MOUNTED CONSTRUCTION AREA SIGNS NOT SHOWN.
2. WITH THE APPROVAL OF THE LOCAL JURISDICTION, SIGNS IN CONFLICT WITH DETOUR SHALL BE COVERED OR REMOVED PRIOR TO RAMP/ROAD CLOSURE AND RESTORED TO ORIGINAL LOCATION/CONDITION UPON COMPLETION OF CLOSURE.
3. TEMPORARY CLOSURES AND DETOURS SHALL BE COORDINATED WITH THE LOCAL JURISDICTIONS PRIOR TO IMPLEMENTATION.
4. CLOSURE OF 9TH AVE DURING CONSTRUCITON SHALL BE COORDINATED WITH THE LOCAL JURISDICTIONS.
5. SEE CALIFORNIA MUTCD PART 6 FOR GUIDANCE NOT SHOWN.

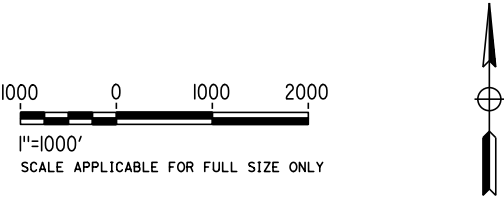
CONSTRUCTION STAGING NOTES

1. CLOSE CAIRO AVE AT 9TH AVE AND 8TH AVE AT CORONA AVE AND CONSTRUCT NEW BRIDGE AND ROAD IMPROVEMENTS.
2. MAINTAIN LOCAL ACCESS TO PROPERTIES ALONG CAIRO AVE AT ALL TIMES DURING CONSTRUCTION.
3. ACCESS TO 8 1/2 AVE SHALL BE MAINTAINED AT ALL TIMES DURING THE CLOSURE OF CAIRO AND 8TH AVENUES.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

NEW SIGN NO. (THIS SHEET ONLY)	NEW SIGN NO. (SEE CV-15201-CAI & CV-15202-CAI)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
(AA)	(G)	MOUNT SIGNS ON TYPE III BARRICADE	ROAD CLOSED
	(C)		DETOUR (LEFT ARROW)
(BB) *	(I)	MOUNT SIGNS ON TYPE III BARRICADE	ROAD CLOSED TO THRU TRAFFIC
	(D)		DETOUR (RIGHT ARROW)

* PROVIDE ADDITIONAL TYPE III BARRICADE AND SIGN G (R11-2) WHEN LOCAL ACCESS IS NO LONGER ALLOWED. SEE CALIFORNIA MUTCD PART 6 FOR GUIDANCE NOT SHOWN.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. BRANCH
DRAWN BY H. MILLER
CHECKED BY D. SPIHLMANN
IN CHARGE R. TREVETT
DATE 04/25/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3

ROADWAY SEGMENT 1
MOTORIST INFORMATION PLAN
CAIRO AVE CLOSED


CONTRACT NO. HSR 13-57
DRAWING NO. CV-11001-CAI
SCALE AS SHOWN
SHEET NO. OF

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NOTES

1. CONTRACTOR MAY USE TEMPORARY SIGN STANDS DURING SHORT-TERM CLOSURES.
2. FEDERAL SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA SIGN CODE.
3. ADVANCE SIGNAGE TO BE IN ACCORDANCE WITH FEDERAL SIGN CODE, CALIFORNIA SIGN CODE, PIP, AND COUNTY STANDARDS.


LEGEND




TEMPORARY SIGN




TYPE III BARRICADE




ROAD CLOSED



EXISTING ROAD



EXISTING MINOR ROAD



DETOUR ROUTE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
(A)	W20-3		36 x 36	1 - 4" x 6"	ROAD CLOSED AHEAD
(B)	W20-2		36 x 36	1 - 4" x 6"	DETOUR AHEAD
(C)	M4-10 (L+)		48 x 18	*	DETOUR (LEFT ARROW)
(D)	M4-10 (R+)		48 x 18	*	DETOUR (RIGHT ARROW)
(E)	M4-8a		24 x 18	1 - 4" x 4"	END DETOUR
(F)		G7-1(CA)	VAR x 18	*	STREET NAME
(G)	R11-2		48 x 30	*	ROAD CLOSED
(H)	R11-3a		30 x 60	*	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
(I)	R11-4		30 x 60	*	ROAD CLOSED TO THRU TRAFFIC
(J)	M4-9 (L+)		30 x 24	1 - 4" x 6"	DETOUR (LEFT ARROW)
(K)	M4-9 (R+)		30 x 24	1 - 4" x 6"	DETOUR (RIGHT ARROW)
(L)	M4-9 (UP)		30 x 24	1 - 4" x 6"	DETOUR (UP ARROW)
(M)	R3-1		24 x 24	1 - 4" x 4"	(NO RIGHT TURN)
(N)	R3-2		24 x 24	1 - 4" x 4"	(NO LEFT TURN)
(O)	M4-9 (UP R+)		48 x 36	1 - 4" x 6"	DETOUR (UP RIGHT ARROW)
(P)	M4-9 (L+)		48 x 36	1 - 4" x 6"	DETOUR (LEFT ARROW)
(Q)	M3-1		24 x 12	*	NORTH
(R)	M3-2		24 x 12	*	EAST
(S)	M3-3		24 x 12	*	SOUTH

* NOT USED ON INDIVIDUAL POSTS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS (CONTINUED)

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
(T)	M3-4		24 x 12	*	WEST
(U)	M3-1		36 x 18	*	NORTH
(V)	M3-2		36 x 18	*	EAST
(W)	M3-3		36 x 18	*	SOUTH
(X)	M3-4		36 x 18	*	WEST
(Y)	M4-8		24 x 12	*	DETOUR
(Z)	M4-8		30 x 15	*	DETOUR
(AB)	M5-1 (R+)		21 x 15	*	(ADVANCE RIGHT ARROW)
(AC)	M5-1 (L+)		21 x 15	*	(ADVANCE LEFT ARROW)
(AD)	M5-2 (R+)		21 x 15	*	(ADVANCE UP RIGHT ARROW)
(AE)	M5-2 (L+)		21 x 15	*	(ADVANCE UP LEFT ARROW)
(AF)	M6-1 (R+)		21 x 15	*	(RIGHT ARROW)
(AG)	M6-1 (R+)		30 x 21	*	(RIGHT ARROW)
(AH)	M6-1 (L+)		21 x 15	*	(LEFT ARROW)
(AI)	M6-1 (L+)		30 x 21	*	(LEFT ARROW)
(AJ)	M6-2		30 x 21	*	(UP RIGHT ARROW)
(AK)	M6-3		21 x 15	*	(UP ARROW)
(AL)	M6-3		30 x 21	*	(UP ARROW)
(AM)		G28-2(CA)	21 x 18	*	(STATE ROUTE XX SHIELD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
M. BRADY

DRAWN BY
M. BRADY

CHECKED BY
D. SPIHLMANN

IN CHARGE
R. TREVETT

DATE
04/25/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
MOTORIST INFORMATION SIGN DETAILS
CAIRO AVE

CONTRACT NO. HSR 13-57
DRAWING NO. CV-15201-CA1
SCALE NO SCALE
SHEET NO. OF

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS (CONTINUED)

NEW SIGN No.	SIGN CODE		PANEL SIZE (IN)	NUMBER OF POSTS AND SIZE	SIGN MESSAGE
	FEDERAL	CALIFORNIA			
AN		G28-2(CA)	35 x 32	*	(STATE ROUTE XX SHIELD)
AO	W20-2		48 x 48	1 - 6" X 6"	DETOUR 1500 FT
AP	W20-1		36 x 36	1 - 4" X 6"	ROAD WORK AHEAD
AQ					NOT USED
AR	W20-3		48 x 48	1 - 6" X 6"	ROAD CLOSED 1000 FT
AS	W20-3		48 x 48	1 - 6" X 6"	ROAD CLOSED 500 FT
AT	W1-6(L+)		48 x 24	*	(LEFT ARROW)
AU	W1-6(R+)		48 x 24	*	(RIGHT ARROW)
AV	W1-7		48 x 24	*	(TWO DIRECTION ARROW)

* NOT USED ON INDIVIDUAL POSTS

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BRADY
DRAWN BY M. BRADY
CHECKED BY D. SPIHLMANN
IN CHARGE R. TREVETT
DATE 04/25/2018



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FB - CONSTRUCTION PACKAGE 2-3
ROADWAY SEGMENT 1
MOTORIST INFORMATION SIGN DETAILS
CAIRO AVE

CONTRACT NO. HSR 13-57
DRAWING NO. CV-15202-CAI
SCALE NO SCALE
SHEET NO. OF

EXHIBIT G-1

Local Project Support

Letter from CHSRA to Kings County

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662



April 28, 2016

BOARD MEMBERS

Dan Richard
CHAIR

Thomas Richards
VICE CHAIR

Lou Correa

Daniel Curtin

Bonnie Lowenthal

Lorraine Paskett

Michael Rossi

Lynn Schenk

Jeff Morales
CHIEF EXECUTIVE OFFICER

Board of Supervisors
County of Kings
1400 W. Lacey Blvd
Hanford, CA 93230

RE: High-Speed Rail Project – Status Update and Planned Construction Activities

Dear Honorable Supervisors:

As you know, the California High-Speed Rail Authority's (Authority) project in the Central Valley (Project) is under construction. Construction has occurred in Madera and Fresno counties to date. We anticipate Project construction will begin in Kings County this spring. Accordingly, I write to provide an update and a summary of the Authority's plans.

The Project alignment in Kings County will intersect various roads managed and maintained by the County of Kings, held in trust for the State of California. As a consequence, these roads (County Roads) will be modified at the point of alignment/road intersection to allow Project alignment construction and operation as approved in the environmental process. Modifications could involve temporary closure during construction, and permanent relocation via grade separation, realignment or rerouting. Attached please find a list of the potentially affected roads that our present research suggests are County Roads, and a brief description of the currently-approved planned modification to each; I understand your staff is already generally aware of these modifications. The attached also contains a brief description of the likely timing for these modifications, and Authority plans for addressing associated matters such as construction safety, traffic routing during construction, etc.

In other Central Valley counties, such as Madera and Fresno, the Authority reached written agreement with the county governments generally as to all construction matters. Coverage included agreement as to construction process, road configuration, county review of Authority construction drawings, Authority reimbursement of county staff time, etc. The County of Kings (County) has not accepted Authority invitation to enter into such an agreement with the Authority.

While the Authority believes such an agreement would benefit both parties – and the Authority remains open to negotiating such an agreement – an agreement is not necessary for the Authority to proceed with its Project in Kings County. The Authority and its contractor will keep the County informed of its construction progress and schedule, and will provide the County copies of its construction design drawings (for review and comment, but not approval) as they evolve toward final design. In fact, we understand that positive discussions are ongoing regarding an agreement by which the Authority's contractor would fund a County-selected engineering consultant (*i.e.*, Zumwalt Hansen, Inc.) to review such design drawings to provide comments as to consistency with established, adopted and written technical specifications such as AASHTO Standards, ADA, etc.; we understand execution of such an agreement will occur very soon.

EDMUND G. BROWN JR.
GOVERNOR




As to County Roads, they are held in trust for the State of California (State). As such, the Authority as a State entity may do preliminary testing within (e.g., soil sampling) and subsequently modify the County Roads without County permission. Our courts have established that property under county management is public property belonging to the State. (*Reclamation Dist. No. 1500 v. Superior Court* (1916) 171 Cal. 672, 679-80.) Even if a county holds legal title to the property, it is property held in trust for the whole state public. (*Board of Education v. Martin* (1891) 92 Cal. 209.) Therefore, "as against the state, [a] county has no ultimate interest in the property under its care." (*County of Marin v. Superior Court* (1960) 53 Cal.2d 633, 639.) The State may take its own property for a state-authorized use without County permission and without compensating the County. (*Reclamation Dist. No. 1500* at 679.) The Authority would prefer to reach agreement with the County as to modification of County Roads, as the Authority has done with Fresno and Madera counties, as noted above. Because agreement is unlikely, the Authority will move forward with its construction, including modification of County Roads, without an agreement, based on the Authority's legal rights to do so.

The Authority recognizes that the County may disagree with the Authority's approach and underlying legal basis. To provide a venue for resolving any such disagreement, the Authority intends to initiate one or more court cases for condemnation, declaratory relief and/or quiet title regarding the County Roads and associated real property rights. For County convenience, we will file the case(s) in Kings or Tulare County Superior Court.

Legally, court involvement to determine the County's rights in the County Roads is not necessary; the County Roads are held in trust for the State. Accordingly, the Authority does not intend to wait for court decision(s) before proceeding with construction that impacts the County Roads; among other reasons, the Authority has obligations to the federal government to expeditiously continue construction. However, the Authority will use its best efforts to initiate these case(s) prior to commencing any significant permanent modifications to County Roads. If the County does not contest the Authority's legal rights, please advise me in writing and the Authority will not initiate the court cases, which would save the County and the Authority litigation expenses.

The Authority believes Project construction can proceed in Kings County in a civil manner despite our differences, and believes the County is committed to the same.

Sincerely,


Diana Gomez
Central Valley Regional Director

Attachments: Description of road modifications
Map of road locations
Description of construction period transportation planning

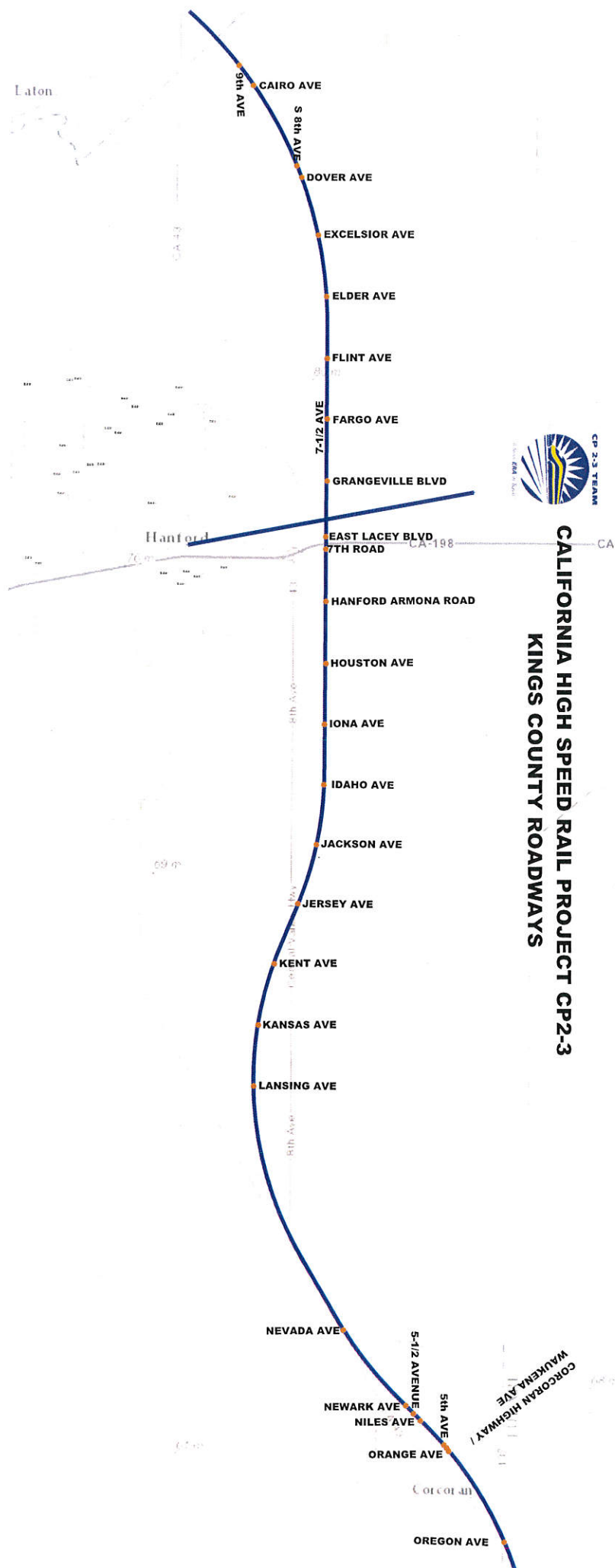
HST Crossings of Roads Managed by Kings County

Road	Proposed Modification	Approximate Major Construction Start Timing ¹
9th Avenue	HST would be elevated on an aerial structure over the road.	Spring 2018
Cairo Avenue	HST would be elevated on an aerial structure over the road.	Spring 2018
8th Avenue	A combined overpass solution (over HST) with Dover Ave. 8th Ave would be elevated to join Dover Ave.	Fall 2017
Dover Avenue	Dover Ave would pass over HST on the existing road alignment.	Fall 2017
Excelsior Avenue	Excelsior Ave would pass over HST north of the existing road alignment.	Summer 2018
Elder Avenue	Elder Ave will be converted to cul-de-sac on each side of HST	Fall 2018
Flint Avenue	Flint Ave would pass over HST to the north of the existing road alignment to avoid the dairy to the south. An access road would be provided for the dairy.	Winter 2018
Fargo Avenue	Fargo Ave would pass over HST north of existing road alignment.	Spring 2018
7½ Avenue	7½ Ave to be realigned south of and connecting to Fargo Ave.	Spring 2018
Grangeville Boulevard	HST would be elevated on an aerial structure over the road.	Winter 2019
East Lacey Boulevard	HST would be elevated on an aerial structure over the road.	2017
7th Road	HST would be elevated on an aerial structure over the road.	2017
Hanford-Armona Avenue	Hanford-Armona would be on a bridge over the HST along the existing road alignment.	Spring 2018
Houston Avenue	Houston Ave would pass over HST along the existing road alignment. Minor adjustments will provide access to industrial properties.	Winter 2018
Iona Avenue	Iona Ave would pass over HST along the existing road alignment.	Fall 2018
Idaho Avenue	Idaho Ave would pass over HST along the existing road alignment.	Fall 2017

¹ Testing, potholing, clearing and grubbing could begin sooner, but would be of short duration.

HST Crossings of Roads Managed by Kings County

Road	Proposed Modification	Approximate Major Construction Start Timing ¹
Jackson Avenue	Jackson Ave would pass over HST along the existing road alignment.	Fall 2018
Jersey Avenue	Jersey Ave will be converted to cul-de-sac at HST right-of-way east of SR 43; traffic would re-route to nearby Jackson and Kent.	2017
Kent Avenue	Kent Ave would pass over HST south of the existing road alignment.	Fall 2017
Kansas Avenue	Kansas Ave would pass over HST south of the existing road alignment.	Fall 2017
Lansing Avenue	Lansing Ave will be converted to cul-de-sac just west of SR 43; traffic would re-route to nearby Kansas.	2017
Nevada Avenue	Nevada Ave will pass over the HST, BNSF, and SR 43 on its existing alignment and connect with existing Nevada Ave east of SR 43. The existing intersection between SR 43 and Nevada Ave will be maintained.	Summer 2018
Newark Avenue	Newark Ave will be converted to cul-de-sacs on both sides of HST right-of-way. West of HST, Newark Ave will be connected to Niles Ave via a connector road.	Summer 2018
5½ Avenue	5½ Ave will be realigned and will connect to Niles Ave east of HST.	Summer 2018
Niles Avenue	Niles Ave will be a cul-de-sac on the west side of HST and will be connected to 5½ Avenue via a connector road.	Summer 2018
5th Avenue	5th Ave to be realigned and connected to Orange Ave.	Summer 2018
Waukena Avenue (Corcoran Highway)	Waukena Ave would shift to the north slightly and pass over HST and a new connector road will be constructed to connect with Orange Ave.	Summer 2018
Orange Avenue	Orange Ave will be re-routed to connect with 5th Ave and Waukena Ave via new connector.	Summer 2018
Oregon Avenue	Oregon Ave will be converted to an access road west of HST to access an Authority ancillary facility.	Summer 2018



Construction Transportation Planning in Kings County

With construction in Kings County beginning in 2016, the Authority is committed to minimizing impacts on local residents during construction of the high-speed rail project and from local construction traffic. As such, the Authority requires its design-builder to prepare a detailed Construction Transportation Plan (CTP). The CTP will be prepared in consultation with the pertinent city or county (to the extent the city or county is willing to provide input), and will be reviewed and approved by the Authority. This plan will address, in detail, the activities to be carried out in each construction phase, including activities to help minimize traffic congestion during peak travel periods. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The CTP will contain a traffic control plan that will include, at a minimum, the following elements:

- Temporary signage to alert drivers and pedestrians to the construction zone
- Flag persons or other methods of traffic control
- Traffic speed limitations in the construction zone
- Temporary road closures and provisions for alternative access during the closure
- Detour provisions for temporary road closures. Alternating one-way traffic will be considered as an alternative to temporary closures where practicable and where it would result in better traffic flow than would a detour
- Identified routes for construction traffic
- Provisions for safe pedestrian and bicycle passage, or convenient detour
- Provisions to minimize access disruption to residents, businesses, customers, delivery vehicles, and buses to the extent practicable. Where road closures are required during construction, limit closures to the hours that are least disruptive to access for the adjacent land uses
- Provisions for farm equipment access
- Provisions for 24-hour access by emergency vehicles
- Safe vehicular and pedestrian access to local businesses and residences during construction. The plan will provide for scheduled transit access where construction would otherwise impede such access. Where an existing bus stop is within the work zone, the design-builder will provide a temporary bus stop at a convenient location away from where construction is occurring. Adequate measures will be taken to separate students and parents walking to and from the temporary bus stop from the construction zone
- Advance notification to the local school district of construction activities and rigorously maintained traffic control at all school bus loading zones, to ensure the safety of school children.
- Promotion of child safety within and near the project area. For example, crossing guards could be provided in areas where construction activities are located near schools, day care centers, and parks.
- CTPs will consider and account for the potential for overlapping construction from reasonably foreseeable projects.

EXHIBIT G-2

Local Project Support

Kings County Basis of Design

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662



TO: Dragados/Flatiron Joint Venture
1775 Park St, Bldg 75
Selma, CA 93662

DATE: 05/24/2017

ATTN: Michael Costa

REF: HSR 13-57, CP2-3 Kings Co Basis of Design Report -

WE ARE SENDING:		SUBMITTED FOR:		ACTION TAKEN:	
<input type="checkbox"/>	Shop Drawings	<input type="checkbox"/>	Approval	<input type="checkbox"/>	Approved as Submitted
<input type="checkbox"/>	Letter	<input checked="" type="checkbox"/>	Your Use	<input type="checkbox"/>	Approved as Noted
<input type="checkbox"/>	Prints	<input type="checkbox"/>	As Requested	<input type="checkbox"/>	Returned After Loan
<input type="checkbox"/>	Change Order	<input type="checkbox"/>	Review and Comment	<input type="checkbox"/>	Resubmit
<input type="checkbox"/>	Plans			<input type="checkbox"/>	Submit
<input type="checkbox"/>	Samples			<input type="checkbox"/>	Returned
<input type="checkbox"/>	Specifications			<input type="checkbox"/>	Returned for Corrections
<input checked="" type="checkbox"/>	Other: HSR 13-57, CP2-3 Kings Co Basis of Design Rpt			<input type="checkbox"/>	Due Date:
		SENT VIA:			
		<input checked="" type="checkbox"/>	Attached		
		<input type="checkbox"/>	Separate Cover Via: CMS		

ITEM NO.	COPIES	DATE	ITEM	NUMBER	REV. NO.	DESCRIPTION	STATUS
1	1	05/16/2017				HSR 13-57, CP2-3 Kings Co Basis of Design Rpt Executed	NEW

REMARKS:
Please see the attached HSR 13-57, CP2-3 Kings Co Basis of Design Report, fully executed, for your use. If you have any questions, please contact Jose Martinez at (559) 558-5199.

CHSRA CP2-3
DOCUMENT CONTROL
RECEIVED SENT

MAY 24 2017

BY: Page London

CC: J.Martinez, A.Joshi

Signed: Page London

For: Jorge Granados

HSR CP 2-3 Manager

California High-Speed Rail Project

CP 2-3 TEAM



Kings County Basis of Design Report

CP 2-3, HSR 13-57

The HSR issued Letter HSR-DFJV-No., 0000142 on the established Kings County Review and Approval Process for Design Build Contract CP 2-3. The CP 2-3 PCM, the Authority CP 2-3 PCM Design Construction Engineer and the Authority PCM CP2-3 Project Manager have reviewed the Kings County Basis of Design and have approved it for transmittal to the Director of Design and Construction.

Prepared By: Bruce Webber Date: 5/4/17
Bruce Webber, Engineering Oversight

Reviewed By: Jose de Jesus Martinez Date: 5/9/17
Jose de Jesus Martinez, Engineering Oversight Manager

Reviewed By: Charlie Guess Date: 5-9-17
Charlie Guess, PCM Design-Build Oversight Manager/Project Manager

Recommended By: Jorge Granados Date: 5/16/17
Jorge Granados, PCM CP2-3 Project Manager

Approved By: Terry Ogle Date: 5/16/17
Terry Ogle, Director of Design and Construction

California High-Speed Rail Project



Design-Build Contract for Construction Package 2-3

Agreement No. HSR13-57



A joint venture

A	4/26/17	Kings County Basis of Design Report				J. BRANCH	G. FROMM	R. TREVETT
Rev	Date	Description				By	Checked	Approved
Prepared By:								
JACOBS								<div>STATUS PRE</div>
Kings County Basis of Design Report								
Particular document code	CP	Construction Segment No.	Depart.	Doc type	Discipline	Identification number	Rev.	Segment
S0616	2-3	2	D	PR	CV	1 001 554	A	1/1

JACOBS

1610 Arden Way, Suite 175
Sacramento, CA 95815
Phone: 916-239-7376



CP 2-3 TEAM



CALIFORNIA HIGH-SPEED RAIL AUTHORITY (AUTHORITY)

CALIFORNIA HIGH SPEED RAIL CONSTRUCTION PACKAGE 2-3

Project No. HSR 13-57

Kings County Basis of Design Report



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APPENDICES

Appendix A - Design Flow Chart for Kings County Roads

Appendix B – Kings County Roadway Classifications and Available ADT Data

Appendix C - Roadway Design Parameters

Appendix D - Drainage Criteria

In accordance with the request of the California High Speed Rail Authority we have prepared a Basis of Design for Kings County, California.

1. Purpose

The purpose of this Basis of Design is to establish design criteria for non-Caltrans roadways in the County of Kings (Kings County) that are being designed and constructed as part of the California High Speed Rail Project (CP2-3). As there is no current agreement in place between the Authority and Kings County, the Authority will be acting on behalf of the County as approver and as such requires the establishment of these design criteria prior to proceeding forward.

2. Referenced Documents

In determining the appropriate design standards, DFJV/Jacobs used the publicly available standards and documents listed below:

- California High Speed Rail Design Criteria Manual (DCM)
- 2010 Kings County 2035 General Plan (Kings County GP)
- 2014 Kings County Regional Transportation Plan (RTP)
- Kings County Improvements Standards (2003) (KCIS)
- AASHTO – A Policy on Geometric Design of Highways and Streets (2011) (AASHTO)
- AASHTO – Roadside Design Guide (2011) (AASHTO RDG)
- Caltrans Highway Design Manual (2010) (Caltrans HDM)
- California Manual on Uniform Traffic Control Devices (2014) (CAMUTCD)
- City General Plans
 - Hanford
 - Corcoran
- San Joaquin Valley Air Pollution Control District (SJVAPCD) RULE 8061 PAVED AND UNPAVED ROADS (Adopted November 15, 2001; Amended August 19, 2004)
- Kings County Association of Governments (KCAG)
- Local Agency Formation Commission of Kings County (LAFCO) - City and Community District Sphere of Influence Update, September 14, 2007
- American with Disabilities Act Standards (2010) – when applicable

3. Design Criteria

Based on our review and interpretation of the planning and design documents listed above, we have prepared a summary of the design criteria currently being used in the design of roadway and roadway related structures within Kings County. The design criteria requirements are presented in the following groups.

- Roadway Geometric Design Criteria
- Roadway Hydraulics Design
- Roadway Pavement Design
- Maintenance Access
- Utilities

3.1 Roadway Geometric Design Criteria

This section will detail the design criteria to be used for the geometric design of roadways in Kings County. In addition where appropriate, justification for the chosen criteria is provided.

3.1.1 Order of Precedence

When designing Kings County Roads the first reference that was consulted was the Kings County GP then the Kings County RTP to determine the roadway classifications. Once the roadway classification was determined the KCIS was reviewed for standards related to the roadway classification. Upon reviewing the KCIS, DFJV/Jacobs noted that certain elements of the design were not addressed including specific criteria for rural roads. Instead, the KCIS indicates that the design standards are for residential and urban roadways.

Section 101 of the KCIS states that the purpose of these standards is two-fold:

- To represent the policy of the Board of Supervisors with respect to when and how improvements must be provided in developments.
- To serve as an engineering reference for Kings County staff and others in the following areas of development: Development Conditions, Development Design, and Development Inspection.

For this reason it is the understanding of DFJV/Jacobs that this manual is intended as a guide for commercial and residential developments in the County. This is supported by the fact that the majority of the standards pertain to urban and residential roads. While DFJV/Jacobs has reviewed these standards and followed them when deemed appropriate, it was determined that these standards must be supplemented with additional criteria from another source.

DFJV/Jacobs selected two potential sources for supplementing the criteria in the KCIS, the Caltrans HDM and AASHTO. After a thorough review of both of these standards, DFJV/Jacobs determined that the HDM is not intended for the design of local roads. The first sentence of the Purpose of the HDM states, **"This manual was prepared for the California Department of Transportation (Department) by the Division of Design for use on the California State highway system." Local County roads are not part of the State Highway system.** Some highways may fall within a local agencies sphere of influence where the local agency may have input on the facility. An example within Kings County is SR 137 (Whitley Avenue).

In addition there are numerous sections in the Caltrans HDM where the reader is directed to consult AASHTO for the design of non-Caltrans roadways. For example Section 101 Design Speeds states, **"Local streets or roads within the State right of way, including facilities which will be relinquished after construction (such as frontage roads), shall have minimum design speeds conforming to AASHTO standards, as per the functional classification of the facility in question."** Section 202 Superelevation, Section 203, Horizontal Alignment, Section 204 Grade, and Section 308 Cross Sections also reference AASHTO standards being used unless the local standards exceed the AASHTO standard.

AASHTO is a complete design reference that provides standards for all types of facilities, from minor local roads all the way to freeways. When supplementation of the KCIS is necessary DFJV/Jacobs will use AASHTO.

In conclusion AASHTO is used as the design criteria when the KCIS does not provide guidance. Where KCIS and AASHTO standards conflict the more stringent standard shall apply.

3.1.2 Road Classification

The first step in determining the design criteria for a given roadway is to determine the roadway classification. Based on Figure C-2 of the Kings County GP - Circulation Element and Chapter 4, Section 1(B) of the RTP, the roadway classifications were determined to be "Minor Arterial" or "Major Collector". Page C-10 of the Kings County GP states that "All County roads not shown on the *Circulation Element Map* are considered residential minor roads or rural minor roads." In most cases the roads impacted by the project would not be described as residential roads. These roads provide connectivity and are typically spaced 1 mile apart, which does not fit the characteristic of residential roads. For this reason the roads that do not appear on the figure were classified as Rural Minor Roads. The KCIS contains limited information about the design of Rural Minor Roads. Therefore, the most appropriate roadway classification is based on AASHTO definitions.

AASHTO Section 1.3.3 defines the classification of rural roads. DFJV/Jacobs considered two classifications from this section for the classification of these roads.

- **Rural Local Road** - Rural Local Roads primarily provide access to land adjacent to the collector network and serves travel over relatively short distances. The local road system should make up approximately 65-75% of the total rural road length.
- **Rural Minor Collector** – These routes (1) serve county seats not on arterial routes, larger towns not directly served by the higher systems, and other traffic generators of equivalent intracounty importance, such as consolidated schools, shipping points, county parks, and important mining and agricultural areas; (2) link these places with nearby larger towns or cities, or with routes of higher classifications; and (3) serve the more important intracounty travel corridors. Collector roads should make up 20-25% of the total rural road length.

In general the county roads being proposed to be constructed over or under the HST are spaced one mile apart. There are existing minor unpaved private roads that connect adjacent land to these evenly spaced paved county roads, that provide access to cities, towns, and other major roads. DFJV/Jacobs understands that the existing unpaved private roads make up the bulk of the rural local road network and that the evenly spaced paved roads that provide connectivity should generally be considered as collectors or arterials. For this reason DFJV/Jacobs has classified the majority of the Rural Minor Roads as Rural Collectors when following AASHTO. Design of these roads in AASHTO is covered by Chapter 6. The exception occurs at Cairo Ave and 9th Ave. These roads in the project vicinity do not provide connectivity to any destination or major through route. They both travel less than 2 miles before they are

blocked by the King's River Complex. These roads have been classified as Rural Local Roads and will be designed using AASHTO Chapter 5.

3.1.3 Spheres of Influence / Urban Fringe

Figure LU-4 of the Land Use Element of the Kings County GP defines the spheres of influence of other governing bodies in Kings County. In addition Figure LU-3 identifies the limits of Urban Fringe Areas. Just because a road is included within these spheres of influences it does not necessarily mean that they should be classified as urban roads. Consideration was taken at each location to evaluate the existing use and characteristics in the Urban Fringe areas to classify the roadway properly. The governing local agency has been consulted and information has been obtained to accommodate the future use of the facilities. It is not appropriate to use the lower design speeds for urban roads if the current characteristic of the land use in the area is rural.

AASHTO Section 5.3.1 states:

"Design speed is not a major factor for local urban streets because in the typical street grid, the closely spaced intersections usually limit vehicular speeds".

This does not apply to most of the roads impacted by the CP2-3 Project.

DFJV/Jacobs contacted the cities of Hanford and Corcoran in Kings County to discuss roads that are within their spheres of influence.

In a letter to the Authority dated September 7, 2016, Lou Camara, City of Hanford Director of Public Works wrote the following:

- The City of Hanford's general plan draft land use map, identifies an area bounded by Grangeville Blvd, 7th Ave, Highway 198, and Highway 43, as an "area of interest" for the future expansion of the City. Even though the "area of interest" currently is located within the county, the City of Hanford has a vested interest in ensuring that transportation improvements to the surrounding circulation system are designed and constructed to meet the future service needs of the City.

Grangeville Blvd and Lacey Blvd are the only County roads impacted by the project that fall within the limits described above by Mr. Camara. DFJV/Jacobs have and will continue to coordinate the designs of these roads with the City of Hanford.

DFJV/Jacobs is currently coordinating with the City of Corcoran as well as the Authority to finalize the design of Corcoran Highway and the surrounding local roadways associated with this project.

3.1.4 Kings County Improvement Standards

The KCIS includes three design tables and three design drawings that apply to the geometric design of roadways. Below is a discussion of how DFJV/Jacobs will use these standards in the design of roadways on the project.

Design Table 2011 and Drawing No. 2011

Design Table 2011 and Drawing No. 2011 provide design criteria for the design of residential roads. None of the roads being directly affected by CP2-3 have been classified as residential roads. However, these criteria will be used as a starting point for the design of the minor roads that have been created by the realignment of the roads crossing the HSR alignment. These roads are necessary to maintain access to properties along the existing alignments of roads that have been realigned. Due to the unique nature of each of these roads a design criteria table will not be established for these roads at this time. A narrative explaining the design criteria and assumptions used for each road will be submitted with each design.

Design Table 2012 and Drawing No. 2012

Design Table 2012 and Drawing No. 2012 provide design criteria for the design of urban roads. None of the roads being affected by CP2-3 have been classified as urban; however, the future use of the roadway in the urban fringe has been reviewed and considered with the local agencies.

Design Drawing No. 2013

Design Drawing No. 2013 provides typical cross sections for the design of rural roads. These drawings will be used in addition to AASHTO when determining the lane and shoulder widths to be used for rural roads. The standard that gives the greater total roadway width will be used for design.

Design Table 2014

Design Table 2014 provides design criteria for the design of intersections. This table will be used on all minor roadways that intersect with the cross road that is impacted by CP 2-3. There are three classifications in the table; Urban, residential, and rural. Although the Kings County GP classifies the roadways within CP 2-3 as Minor Arterials or Major Collectors, all the roads will be considered Rural for the use of this table. The two standards that apply for a rural classification are the approach speed and the intersection angle. The approach speed is the intersection sight distance required for the minor roadway.

3.1.5 Design Process

The classification for roadways between the Kings County GP and KCIS are different. The Kings County GP has classifications of Interstate and Other Principal Arterials, Minor Arterial, and Major Collector. KCIS has classifications of Urban (Arterial, Collector, and Minor), Residential (Collector and Minor), and Rural (Arterial, Collector, and Minor). The Kings County GP designation of Arterial or Collector correlates to the KCIS designations in the Urban, Residential, and Rural classifications.

Below is a summary of the process that DFJV/Jacobs is using to determine the appropriate design criteria for non-Caltrans roadways in Kings County.

- 1) Refer to Kings County GP Figure C-2 and Kings County RTP Section 1(B). If the roadway is shown on the map or in the listing, it will be classified as shown. If it is not shown on the map or in the listing, it will be classified as a Minor Road.
- 2) If the roadway is not within the sphere of influence of Hanford or Corcoran, it will be classified as rural. If the roadway is within the sphere of influence of Hanford or

Corcoran, it will be classified as either urban (go to step 3), residential (go to step 4) or rural (go to step 5) based on discussions with the city and an investigation of the characteristic of the current land use in the project vicinity.

- 3) If the roadway is classified as an Urban Minor, Urban Collector, or Urban Arterial, it will be designed using Design Table 2012 in the Kings County Improvement Standards. AASHTO will be consulted where this table does not provide guidance.
- 4) If the roadway is classified as a Residential Minor Road or a Residential Collector, it will be designed using Design Table 2011 in the Kings County Improvement Standards. AASHTO will be consulted where this table is lacking.
- 5) If the roadway is classified as Rural, there is no appropriate Design Table in the Kings County Improvement Standards. The only standard that applies is Design Table 2014 for intersection design. If the roadway was classified as a Collector or Arterial in step 1, go to step 6 or step 7 respectively. If the roadway was not shown on Figure C-2, it will be classified as either a Rural Collector (go to step 8) or a Rural Local Road (go to step 9) based on whether it provides connectivity.
- 6) If the roadway is classified as a Rural Collector, there is no appropriate Design Table in the Kings County Improvement Standards. The only standard that applies is Design Table 2014 for intersection design. With the exception of intersection design the roadway will be designed using AASHTO Chapter 6.
- 7) If the roadway is classified as a Rural Minor Arterial, there is no appropriate Design Table in the Kings County Improvement Standards. The only standard that applies is Design Table 2014 for intersection design. With the exception of intersection design the roadway will be designed using AASHTO Chapter 7.
- 8) If the roadway is classified as a Rural Collector, with the exception of intersection design, the roadway should be designed using AASHTO Chapter 6.
- 9) If the roadway is classified as a Rural Local Road, with the exception of intersection design, the roadway should be designed using AASHTO Chapter 5.

See Appendix A for a flow chart showing the steps DFJV/Jacobs is using to determine the design criteria for each road in Kings County. Appendix B contains a table that lists the existing county roads affected by CP2-3. This table includes the roadway classification, available ADT information, and design speed. Appendix C contains design criteria tables for Rural Arterials and Rural Collectors. These two classifications cover all major roads affected by the CP2-3 Project. These tables list the source and criteria to be followed for the design of Kings County roads.

3.2 Roadway Hydraulics Design Criteria

The DCM recommends using the Caltrans HDM for the track drainage design of culvert crossings under the High Speed Rail (HSR). The cross drains under the local roadways within Kings County are controlled by the drainage criteria for the HSR culvert crossings. In order to maintain consistency in design for application of all local roadway overcrossings and state routes, the Caltrans HDM criteria was also used for hydrology and hydraulics design of these facilities.

Refer to the attached Drainage Criteria Summary in Appendix D for more details about the design criteria that DFJV/Jacobs are following for the drainage design.

3.3 Roadway Pavement Design

KCIS Section 302 (B) Standards for Urban Roads and Residential Streets states, structural section of a road may be designed by using the methods prescribed in the California Department of Transportation Design Manual, Part 7 or it may be selected from Table 3021. In KCIS Section 302 (C) For Rural Roads it states rural road construction standards shall be as recommended by the Public Works Department based on an approved engineering evaluation of existing soil conditions and expected traffic conditions.

For roadways classified as Urban or Rural the method prescribed in the California Department of Transportation Design Manual, Part 7 will be used. Calculations will be provided to justify the pavement design section.

3.4 Maintenance Access

Consideration for maintenance activities and access will be given during final design.

3.5 Utilities

Identification and verification of existing utilities will be coordinated during final design. If a utility is determined to be in conflict the utility owner will develop relocation plans. The relocation of the utility will be outside the conflict area and be coordinated with the local agency. In general, utilities currently in legal franchise with the County will return to the same status upon completion of the relocations.

4. Conclusion

After a thorough review of the available information DFJV/Jacobs has come to the following conclusion regarding the design of Kings County Roads:

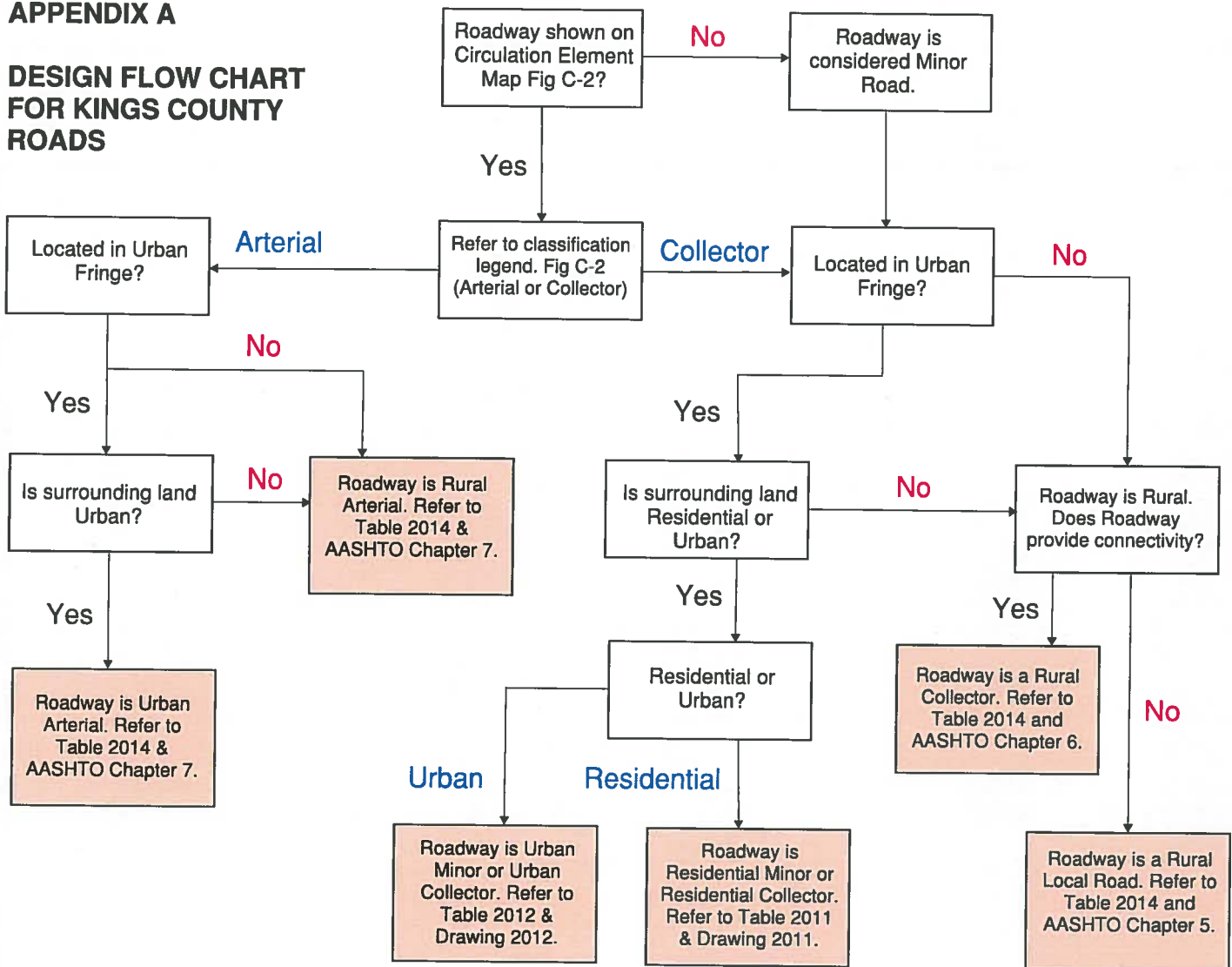
- When the Kings County Improvement Standards does not provide guidance, AASHTO is the appropriate standard to follow.
- The KCIS is intended as a guide for commercial and residential developments in the County. The majority of the standards pertain to urban and residential roads.
- Table 2014 in the KCIS is for the design of intersections. The design of all King County roads will use the values for Intersection sight distance and intersection angle found in this table.
- Not all Kings County roads that fall within the urban fringe should be classified as urban. The design speeds given in the urban and residential standards in the Kings County Improvement Standards may not be appropriate for most of the impacted roads. There should be coordination with the local agency identifying the roadway in the urban fringe to determine the future use of the facility and the appropriate classification of the roadway.

Appendix A

Design Flow Chart For Kings County Roads

APPENDIX A

DESIGN FLOW CHART FOR KINGS COUNTY ROADS



Appendix B

Kings County Roadway Classifications and Available ADT Data

Appendix B - Kings County Roadway Classifications and Available ADT Data

Crossing	Kings County GP Roadway Classification	AASHTO Roadway Classification	Design Speed Per AASHTO	2035 ADT	Design ADT	Remarks
Cairo Ave	Rural Road	Rural Local Road	50	No Data	<400	There is no available data. This road does not provide any connectivity to any destination or major through route. This segment of the road is less than 2 miles long. It is assumed that only local residents use this road regularly. An ADT of less than 400 has been assumed.
9th Ave	Rural Road	Rural Local Road	50	No Data	<400	There is no available data. This road does not provide any connectivity to any destination or major through route. This segment of the road is less than 2 miles long. It is assumed that only local residents use this road regularly. An ADT of less than 400 has been assumed.
Dover Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since the City of Hanford is several miles to the south and there are no population centers to the east or west it is assumed that traffic volumes are low. For design purposes an ADT of 1500 has been assumed. This number is conservative.
8th Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since the road ends approximately 2 miles north and 1 mile south of Dover Ave, it has been assumed that the volumes are low. A value of 1500 has been assumed. This number is conservative.
Excelsior Ave	Minor Arterial	Rural Minor Arterial	60	2,519	2,519	ADT from 2014 Kings County Regional Transportation Plan (KC RTP).
Flint Ave	Major Collector	Rural Collector	50	503	503	ADT from 2014 KC RTP.
Fargo Ave	Major Collector	Rural Collector	50	No Data	1,500	2014 KC RTP lists a 2035 ADT of 13,070 for the 1 mile section west of SR 43. The new crossing is just east of SR 43. There is no available data east of SR 43. However, since the City of Hanford is to the west of SR 43 it is anticipated that the ADT east of SR 43 will be considerably less than to the west. Also, Fargo Ave ends in a tee-intersection with 6th Ave approximately 4 miles to the east of SR 43. For these reasons it has been assumed that the majority of the traffic on Fargo Ave turns onto SR 43. This is consistent with the data from Flint Ave 1 mile to the north. For design purposes an ADT of 1500 has been assumed for Fargo Ave. This number is conservative.
Grangeville Blvd	Minor Arterial	Rural Minor Arterial	60	13,180	13,180	ADT from 2010 Kings County 2035 General Plan - Circulation Element (2035 GP)
Lacey Blvd	Major Collector	Rural Collector	50	No Data	1,500	2014 KC RTP lists a 2035 ADT of 13,908 for the 2 mile section west of SR 43. The new crossing is just east of SR 43. There is no available data east of SR 43. However, since the City of Hanford is to the west of SR 43 it is anticipated that the ADT east of SR 43 will be considerably less than to the west. It has been assumed that the majority of the traffic turns onto SR 43. For design purposes an ADT of 1500 has been assumed. This number is conservative.
Hanford-Armona Road	Major Collector	Rural Collector	50	No Data	1,768	Traffic data of 1,768 is for a 1 mile section 1 mile west of SR 43. The new crossing is just east of SR 43. There is no available data east of SR 43. However, since the City of Hanford is to the west of SR 43 it is anticipated that the ADT east of SR 43 will be considerably less than to the west. Also, Hanford-Armona Rd ends in a tee-intersection with 6th Ave approximately 4 miles to the east of SR 43. For design purposes the ADT of 1768 will be used. This number is conservative.
Houston Ave	Major Collector	Rural Collector	60	2,369	2,369	ADT from 2014 KC RTP.
Iona Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since the cities of Hanford and Lemoore are to the west of SR 43 and the crossing is to the east of SR 43 it is assumed that traffic volumes are low. For design purposes an ADT of 1500 has been assumed. This number is conservative.
Idaho Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since the cities of Hanford and Lemoore are to the west of SR 43 and the crossing is to the east of SR 43 it is assumed that traffic volumes are low. For design purposes an ADT of 1500 has been assumed. This number is conservative.
Jackson Ave	Major Collector	Rural Collector	50	No Data	1,500	2014 KC RTP lists a 2035 ADT of 2,224 for the 2 mile section west of SR 43. The new crossing is just east of SR 43. There is no available data east of SR 43. However, the classification of Jackson Ave changes from a Major Collector to a Minor Collector east of SR 43. Also, Jackson Ave ends in a tee-intersection with 5th Ave approximately 3 miles to the east of SR 43. For these reasons it has been assumed that the majority of the traffic on Jackson Ave turns onto SR 43. For design purposes an ADT of 1500 has been assumed for Jackson Ave. This number is conservative.
Jersey Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since it was not given a designation in the County of Kings 2035 General Plan and no traffic data was included, it has been assumed that the volumes are low. A value of 1500 has been assumed. This number is conservative.
Kent Ave	Major Collector	Rural Collector	50	No Data	1,500	There is no available data. Since it was not given a designation in the County of Kings 2035 General Plan and no traffic data was included, it has been assumed that the volumes are low. A value of 1500 has been assumed. This number is conservative.
Kansas Ave	Minor Arterial	Rural Minor Arterial	60	4,887	4,887	ADT from 2014 KC RTP.
Nevada Ave	Major Collector	Rural Collector	50	3,045	530	3,045 ADT is from 2014 KC RTP. This ADT represents a 9.63% growth rate for the next 21 years. The growth rate of SR 43 is 2.08% for the same area. This is obviously an error. A conservative growth rate of 3% (still larger than SR 43) results in a 2035 ADT of 530. 530 will be used for the design ADT.
Corcoran Highway	Major Collector	Rural Collector*	50*	No Data	No Data*	DFJV/Jacobs is still discussing the design Criteria with the City of Corcoran.

Appendix C - Roadway Design Paramaters

Roadway Design Parameters Rural Arterial				
No.	Design Element	Value	Supplemental Design Criteria AASHTO ("Green Book") AASHTO Roadside Design Guide (RDG) Highway Design Manual (HDM)	Remarks
1	Roadway Classifications	Rural Arterial		
2	Design Speed (mph)	60	AASHTO Section 7.2.2	
3	Lane Width (ft)	12	AASHTO Table 7-3	
4	Paved Shoulder Width (ft)	8	AASHTO Table 7-3	Note that the table allows smaller shoulders for ADTs < 2000 All Kings County Rural Arterials have an ADT > 2000.
5	Side Slopes	Cut: 2H to 1V Fill: 2H to 1V	AASHTO RDG	Geotechnical reports allow up to 2:1 side slopes.
6	Stopping Sight Distance (ft)	570	AASHTO Table 7-1	
7	Maximum Superelevation (%)	12	AASHTO Section 7.2.2	Snow and Ice not a regular occurance. 12% max table to be used. As a general best design practice radii should be selected that result in a maximum superelevation of 10%.
8	Minimum Radius @ Normal Crown (ft)	11,800	AASHTO Table 3-12b	
9	Min. Radius @ Maximum Superelevation (ft)	1,000	AASHTO Table 3-12b	
10	Superelevation Runoff L _R	Calculated	AASHTO Eqn (3-23)	Specific to actual superelevation rates
11	Superelevation Runoff Application	2/3L / 1/3L	AASHTO Section 3.3.8	
12	Maximum Grade (%)	4%	AASHTO Table 7-2 & Section 3.4.2	Table 7-2 allows 3%. Section 3.4.2 allows a 1% increase in grade from the value shown in Table 7-2 for grades with lengths of less than 500' on low-volume rural highways.
13	Minimum Grade (%)	0.30%	AASHTO Section 3.4.2 - Minimum Grades	
14	Minimum Vertical Curve K-Crest	151	AASHTO Table 3-34	
15	Minimum Vertical Curve K-Sag	136	AASHTO Table 3-36	
16	Minimum Length of Vertical Curve (ft)	3* Design Speed	AASHTO Section 3.4.6 Page 3-153	
17	Intersection Sight Distance (mph)	70	KCIS Table 2014	
18	Minimum Angle of intersection (degrees)	60	KCIS Table 2014	
19	Minimim Horizontal Clearance (ft)	Calculated	AASHTO RDG Table 3-1	Clear Zone dependant on Design ADT and slope.
20	Minimum Vertical Clearance (ft)	16.5'	AASHTO Section 7.2.5	6 inches added for future resurfacing.

Appendix C - Roadway Design Paramaters

Roadway Design Parameters Rural Collector				
No.	Design Element	Value	Supplemental Design Criteria AASHTO ("Green Book") AASHTO Roadside Design Guide (RDG) Highway Design Manual (HDM)	Remarks
1	Roadway Classifications / Design Standard	Rural Collector		
2	Design Speed (mph)	40 - 60	AASHTO Table 6-1	Depends on ADT.
3	Lane Width (ft)	10 - 12	AASHTO Table 6-5	Depends on ADT.
4	Paved Shoulder Width (ft)	4 - 8	AASHTO Table 6-5 & SJVAPCD Rule 8061	Depends on ADT. Minimum shoulder width of 4' must be used to comply with SJVAPCD Rule 8061.
5	Side Slopes	Cut: 2H to 1V Fill: 2H to 1V	AASHTO RDG	Geotechnical reports allow up to 2:1 side slopes.
6	Stopping Sight Distance (ft)	305 - 570	AASHTO Table 3-1	Depends on Design Speed
7	Maximum Superelevation (%)	12	AASHTO Section 6.2.1	Snow and Ice not a regular occurance. 12% max table to be used. As a general best design practice radii should be selected that result in a maximum superelevation of 10%.
8	Minimum Radius @ Normal Crown (ft)	5,580 - 11,800	AASHTO Table 3-12b	Depends on Design Speed
9	Min. Radius @ Maximum Superelevation (ft)	381 - 1000	AASHTO Table 3-12b	Depends on Design Speed
10	Superelevation Runoff L _R	Calculated	AASHTO Eqn (3-23)	Specific to actual superelevation rates
11	Superelevation Runoff Application	2/3L / 1/3L	AASHTO Section 3.3.8	
12	Maximum Grade (%)	5 - 7%	AASHTO Table 6-2	
13	Minimum Grade (%)	0.30%	AASHTO Section 3.4.2 - Minimum Grades	
14	Minimum Vertical Curve K-Crest	44 - 151	AASHTO Table 3-34	
15	Minimum Vertical Curve K-Sag	64 - 136	AASHTO Table 3-36	
16	Minimum Length of Vertical Curve (ft)	3* Design Speed	AASHTO Section 3.4.6 Page 3-153	Vertical curves
17	Intersection Sight Distance (mph)	70	KCIS Table 2014	
18	Minimum Angle of intersection (degrees)	60	KCIS Table 2014	
19	Minimim Horizontal Clearance (ft)	Calculated	AASHTO RDG Table 3.1	Clear Zone dependant on Design ADT and slope.
20	Minimum Vertical Clearance (ft)	15	AASHTO Section 6.2.3 & DD-CV-904	CAHSR Directive Drawing DD-CV-904 requires 15'-0" as a minimum.

Appendix C - Roadway Design Paramaters

Roadway Design Parameters Rural Local Road				
No.	Design Element	Value	Supplemental Design Criteria AASHTO ("Green Book") AASHTO Roadside Design Guide (RDG) Highway Design Manual (HDM)	Remarks
1	Roadway Classifications / Design Standard	Rural Minor		
2	Design Speed (mph)	30 - 50	AASHTO Table 5-1	Depends on ADT. 50 mph should be considered even with lower ADT.
3	Lane Width (ft)	10 - 12	AASHTO Table 5-5	Depends on ADT.
4	Paved Shoulder Width (ft)	4 - 8	AASHTO Table 6-5 & SJVAPCD Rule 8061	Depends on ADT. Minimum shoulder width of 4' must be used to comply with SJVAPCD Rule 8061.
5	Side Slopes	Cut: 2H to 1V Fill: 2H to 1V	AASHTO RDG	Geotechnical reports allow up to 2:1 side slopes.
6	Stopping Sight Distance (ft)	305 - 570	AASHTO Table 3-1	Depends on Design Speed
7	Maximum Superelevation (%)	12	AASHTO Section 6.2.1	Snow and Ice not a regular occurance. 12% max table to be used. As a general best design practice radii should be selected that result in a maximum superelevation of 10%.
8	Minimum Radius @ Normal Crown (ft)	3,370 - 8,370	AASHTO Table 3-12b	Depends on Design Speed
9	Min. Radius @ Maximum Superelevation (ft)	188 - 641	AASHTO Table 3-12b	Depends on Design Speed
10	Superelevation Runoff L _R	Calculated	AASHTO Eqn (3-23)	Specific to actual superelevation rates
11	Superelevation Runoff Application	2/3L / 1/3L	AASHTO Section 3.3.8	
12	Maximum Grade (%)	6 - 7%	AASHTO Table 5-2	
13	Minimum Grade (%)	0.30%	AASHTO Section 3.4.2 - Minimum Grades	
14	Minimum Vertical Curve K-Crest	19 - 84	AASHTO Table 3-34	
15	Minimum Vertical Curve K-Sag	37 - 96	AASHTO Table 3-36	
16	Minimum Length of Vertical Curve (ft)	3* Design Speed	AASHTO Section 3.4.6 Page 3-153	Vertical curves
17	Intersection Sight Distance (mph)	70	KCIS Table 2014	
18	Minimum Angle of intersection (degrees)	60	KCIS Table 2014	
19	Minimim Horizontal Clearance (ft)	Calculated	AASHTO RDG Table 3.1	Clear Zone dependant on Design ADT and slope.
20	Minimum Vertical Clearance (ft)	15	AASHTO Section 5.2.3 & DD-CV-904	CAHSR Directive Drawing DD-CV-904 requires 15'-0" as a minimum.

Appendix D - Drainage Criteria

No.	Design Element	Descriptor	Value	CaHSR Authority Book III, Part A - Design Criteria Manual Section	Supplemental Design Criteria	Remarks	CaHSR Standard Detail:
1	Hydrologic Methodology	Drainage Areas < 320 Ac (0.5 sq-mi)	N/A	8.4 & 8.4.5	Caltrans HDM 819.2(1) & Kings County Improvement Standards (1-sq-mi cutoff)	use Rational Method (<0.50 sq-mi)	N/A
		Drainage Areas > 320 Ac (0.5 sq-mi)	N/A	8.4 & 8.4.5	Caltrans HDM Table 819.5A	SCS Unit Hydrograph Method (note: Regression Eqn in Sierra Nevada Region)	N/A
2	Time of Concentration T_c	Minimum T_c	10-minutes (Rural)	8.4.1	Caltrans HDM 816.6	For Rational Method: Calculate T_c using Sheet Flow, Shallow Concentrated Flow and Channel/Pipe/Gutter Flow Time, otherwise, use Stream Stats	N/A
3	Rainfall Intensity	Initial estimate from NOAA PFDS	Varies	8.4.2	Kings County Improvement Standards Table 4021	Calculate from IDF Curves from NOAA Atlas 14 or Local Agency Manuals	N/A
4	Runoff Coefficients	C-Factor for Rational Method	Varies	N/A	Kings County Improvement Standards Drawing 4021	CaHSR Design Criteria: 8.4 Hydrologic Analysis, 'for criteria not included in this section, refer to Caltrans HDM', IE: Table 819.2B	N/A
5	Design Storm Frequency	Drainage facilities crossing the track (e.g., culverts)	50-yr	8.4.3, Table 8-1	AREMA Sec 4.8.2	Standard Engineering Practices by other California rail operators. AREMA Sec 4.8.2 requires that the crown of the culvert be at or above the 25-yr HW elevation and that the max 100-yr elevation be the lower of either 2' below rail base or 1.5 times the culvert diameter.	N/A
6		Drainage facilities not crossing the track (e.g., parking lots, access roads, station drainage facilities)	10-yr	8.4.3, Table 8-1		Standard Engineering Practices by other California rail operators.	N/A
7		Ditches/storm drainage systems adjacent to the track	25-yr	8.4.3, Table 8-1		Standard Engineering Practices by other California rail operators.	N/A
8		Freeways – Minor Ramps and Frontage Roads	10-yr	8.4.3, Table 8-1		Caltrans HDM, Table 831.3 shall be referred to for Roadway Drainage Guidelines.	N/A
9		Conventional Highways – High volume, multilane or urban with speeds 45 mph and under		8.4.3, Table 8-1	Kings County Improvement Standards	Caltrans HDM, Table 831.3 shall be referred to for Roadway Drainage Guidelines.	N/A
10		Freeways – Through traffic lanes, branch connections, and other major ramp connections		8.4.3, Table 8-1	Kings County Improvement Standards	Caltrans HDM, Table 831.3 shall be referred to for Roadway Drainage Guidelines.	N/A
11		Conventional Highways – High volume, multilane or low volume, rural with speeds over 45 mph	25-yr	8.4.3, Table 8-1	Kings County Improvement Standards	Caltrans HDM, Table 831.3 shall be referred to for Roadway Drainage Guidelines.	N/A
12		All State Highways	50-yr	8.4.3, Table 8-1		Caltrans HDM, Table 831.3 shall be referred to for Roadway Drainage Guidelines.	N/A
13		Drainage systems crossing under bridge structure and on the right-of-way	50-yr	8.4.3, Table 8-1		Standard Engineering Practices by other California rail operators.	N/A
14		Critical HST Structures/Facilities	500-yr	8.4.3, Table 8-1, & 8.6.7		HST critical Facility sites: traction electrification system, automatic train control, communications, vent structures, traction power supply sites, operation control centers, yards, etc., shall be designed to drain so that the finish floor elevation or top of slab foundation of the facility sites remain 6 inches above a 500-year flood elevation or 2 feet above 100-year flood elevation, whichever is greater.	
15	Base Flood Elevations	Floodplain areas	100-yr	8.4.6	CVFPB, Tulare County Resource Management Agency (TRMA)	Track subballast (bottom) shall be a minimum of 2 feet (3 feet if debris is a concern) higher than the 100-year Base Flood Elevation. No rise allowed in floodway by County. 0.1' of rise allowed by FEMA. 1' rise allowed in flood fringe.	N/A
16	Base Flood Elevations & Scour	Floodplain areas	100-yr	8.4.6	Caltrans 804, FEMA, County	FEMA Guidelines - All other Flood Plain Crossings	N/A
17	Base Flood Elevations & Scour	Floodplain areas	100-yr	N/A	Central Valley Flood Protection Act of 2008	Per Executive Order 11988	N/A
18	Hydraulic Design Calculations	Manning's Eqn-Chnl Hydraulics, HDS 01-Bridged Streams, HEC 21- Deck Drains, HEC 09-Debris Control	N/A	8.5	Caltrans HDM Physical Standards	Programs - CulvertMaster, FlowMaster, PondPak, HEC-RAS, WSPG, StormCad, InRoads Storm and Sanitary, SWMMM, HY8, WSPRO, FESWMS-2DH/SMS	N/A
19	Manning's Roughness	0.016-AC, 0.015-Conc Pvmt, 0.014- Conc Chnl, 0.013-RCB, 0.013-RCP, 0.024 to 0.028-CMP, 0.012-HDPE	Varies	8.5	Clark County Regional Flood Control District	Rip Rap - Use Eqn pg 8-8 CaHST Design Criteria, Bioswales - Use 0.05 for WQF per Caltrans PPDG, Other Chnls - Use Table 864-3A per Caltrans HDM	N/A
20	Maximum Permissible Velocities	Veg Chnl = 5 fps, Rip Rap = 10 fps, Grouted Rip Rap/ Gabions/ Soil Cement = 15 fps, Conc Chnl = 35 cfs	Varies	8.5.2.1		See Table 862.2 per Caltrans HDM for max velocities of unlined ditches	N/A
21	Culverts - Under Tracks	Use AREMA Criteria, RCP to be used for pipe culverts	Minimum Self Cleaning V = 2.5 fps	8.5.3		Min Culvert Size Under Tracks = 36" per CaHSR Criteria, Min Cover = 6' from T/R per CaHST Criteria. Areas where min cover < 6' will require specially box culvert structure designed per Section 12.6.13	CaHST Guidelines Section 8.5.3, 12.6.13
22	Culverts - Adjacent to Tracks	Use AREMA Criteria for Track R/W, Caltrans HDM for Roads/Highways, Material = RCP, PVC, CMP, HDPE	Minimum Self Cleaning V = 2.5 fps	8.5.3	Kings County Improvement Standards (Bt Ct CMP, Concrete)	Min Culvert Size Adjacent to Tracks = 18" per CaHST Criteria, Min Cover = 4' (within 45' of CL) and 3' (beyond 45' of CL), Reduced Clearances Need Approvals	N/A
23	Culverts - Inlet/Outlet Control	Head/Wing Walls, Flared End Sections (FES), Energy Dissipation	Max HW=1.5D	8.5.3		Use Headwalls if R/W Constrained, Preference toward FES, HW freeboard = 2' (below sub-ballast - 100-yr storm), Outlet w/ rip rap apron per eqn on CaHST Criteria pg 8-16	CTSP D84-D86, D89, D90, D94

Appendix D - Drainage Criteria

No.	Design Element	Descriptor	Value	CaHSR Authority Book III, Part A - Design Criteria Manual Section	Supplemental Design Criteria	Remarks	CaHSR Standard Detail:
24	Culvert - Self-Cleaning Velocity	A minimum self cleaning velocity within Pipes	2.5 fps	8.5.3.2	Kings County Improvement Standards (2.5 fps @ 2-yr)	Use Caltrans HDM 838.4 Standards: Slope. The minimum longitudinal slope should be such that when flowing half full, a self cleaning velocity of 3 feet per second is attained.	
25	Channels	6 second shall be used for culvert design	N/A	8.5.2	AREMA's for new channels, Caltrans HDM for design criteria not in AREMA and for existing cahnnels, local criteria shall be followed as required by the governing agency	4:1 Earthen V-Ditch	AREMA 1.2.4.2
26	Storm Drain Criteria	Roadway Drainage Systems per Caltrans HDM, City of Fresno, FMFCD (Counties use Caltrans Standards)	N/A	8.6.9	Caltrans HDM criteria, Existing Environmental Permits,	Caltrans Systems use RCP/HDPE/CMP w/ 18" Min Diameter (25-yr), City of Fresno prefers surface drainage w/ sidewalk drains/ valley gutters/ ditches, FMFCD SD designed for 2-yr	CTSP A62, D71-D78, D91-93, Fresno Std P10, P22-P23; FMFCD Std A1-A9, B1-B7
27	RSP Design	Used as a rip rap apron or stilling basin for energy dissipation and on embankments up to 1.5:1 side slope	N/A	8.5.2.4		Thickness dependent on rip rap size. Calculate per CaHST Design Criteria pg 8-16 or per Caltrans HDM Tables 873.3 B and C.	
28	Spread	Allowable Spread = Shoulder for Freeways/ Highways (25-yr) and 1/2 Outer Lane for Local Roads (10-yr)	Varies	8.6.9	Kings County Improvement Standards (2-yr top of curb)	See Caltrans HDM Table 831.3, cross flow shall not exceed 0.1 cfs on freeways/ highways at superelevation reversals	
29	Inlets, Manholes	Sidewalk Drains, Catch Basins, Junction Structures, Manholes - Spacing per CaHST Criteria Table 8-5	N/A	8.6.9		Sidewalk drains and Lot drainage per City of Fresno, Local inlets and Manholes in Fresno per FMFCD, local inlets in Fresno capture a maximum of 6 cfs for 2-yr frequency storm, inlets and manholes for Caltrans and Madera County per Caltrans Standard	Fresno Std P22-P23, FMFCD Std Plans A1-A9 & B1-B7, CTSP D71-D78
30	Overside Drains	Curb openings and lined spillway conveying flow to adjacent ditch or channel	N/A	8.5.2.2	Local agencies or the Army Corp of Engineers	Sidewalk drains and overflow spillways are method of surface flow drainage systems that are more desireable within City of Fresno	CTSP D-87, Fresno Std P23
31	Bridges	Longitudinal drainage system along bridge to prevent spread, includes deck drain inlets, pipes, column downdrains per Caltrans stds	N/A	8.6.9	Caltrans HDM	Design Bridge drainage system per Caltrans HDM and Caltrans standards for deck drains, piping systems and column down drains. Spread per Caltrans HDM.	CTSP B7-5 to B7-8
32	Underdrains	Used to drain trackway, placed longitudinally at outside of track where R/W or structures constrain corridor where ditches can't be used	10-yr	8.5.2.3		For lengths> 500', use min 8" diameter, otherwise min 6". Cleanouts every 300'. Material=plastic perf pipe w/ metal risers placed at beginning and 300' spacing. Min 3' cover. Min S=0.5%. Min V=2 fps	See Directive Dwg DD-CD-003 for layout & placement of drain aggregate and geotextile fabric
33	Open Channels	Used to drain trackway and capture offsite flow, placed longitudinally at outside of track where R/W allows.	25-yr	8.5.2.1	AREMA's for new channels, Caltrans HDM for design criteria not in AREMA and for existing cahnnels, local criteria shall be followed as required by the governing agency	4:1 SS Earthen V-ditches. Fbd = 2' below subballast (100-yr)	See Directive Dwg DD-CD-003 for layout & placement of ditches
34	Bridge Deck Drain System	Longitudinal drainage system along bridge, used to minimize standing water, includes deck drain inlets, pipes, downspouts, end collectors	10-yr	8.6.3.4		Use 50% clogging factor, for ballasted bridges use underdrain pipe sizes, for non-ballasted bridges use drainage trough, provide upstream drainage to prevent flow from entering bridge upstream, 1% min slope for pipe system.	See Directive Dwg DD-CD-001, -002, -005
35	Floodplains	Tracks to be designed with bottom of subballast 2' above 100-yr BFE, shall not reduce flood storage capacity within drainage way or increase WS	100-yr	8.4.6	Caltrans HDM general Aspects chapter for FEMA guidelines	Rip rap underlain by geotextile shall be placed up to 2' above 100-yr BFE per CaHST Guidelines Figure 10-5 (section 10.8.5.3),	CaHST Guidelines Figure 10-5
36	Trenches	Trenches shall drain to trench pump station. Force Main from PS will be routed to adjacent detention basins to reduce flow rates to 2-yr.	2-yr	8.6.6		Trench section walls shall be treated as levees, height must be min 3' above the 100-yr BFE per FEMA. Trench pump stations designed for buildout condition but constructed for temp condition (equipped w/ small sump pump)	
37	Track Related Roadway/Parking Lot	Provide inlets and storm sewer for surface drainage.	10-yr	8.6.9		0.1 cfs max cross flow. No ponding in parking lots.	
38	Stations and Platforms	Slope outboard platform away from track, slope center platform to center with area drains.	10-yr	8.6.8		See Directive Dwg DD-CD-010.	See Directive Dwg DD-CD-010
39	Flow Control Criteria	Limit peak outflow to pre-project discharge.	2-yr to 100-yr	8.7.1	HDM 890, AASHTO Model Drainage Manual	Cannot increase existing discharges. No local release rate requirements.	
40	Retaining Walls	Place concrete ditches behind retaining walls to capture surface runoff from offsite.	100-yr	8.6.5		Conc ditch/ wall drain per CTSP B3-6.	CTSP B3-6
41	Hydrograph Analysis	Provides volume of storage necessary for detention. Use Volumetric Method using Trapezoidal Hydrograph per Section 8.7.2 of CaHST Design Criteria.	Varies	8.7.2	FHWA HEC-22, AASHTO Model Drainage Manual	Volumetric Method used for areas< 150 acres per Figure 8-1. Use Hydrograph Method (difference between inflow and outflow hydrographs) for areas >150 acres. 24 hr duration to be used.	N/A
42	Infiltration Basins	Retention basins sized to collect 25-50-100-yr discharge from all sumped crossings.	25-50-100-yr	8.7.3	Caltrans PPDG 2.4.2.2	See sections 8.7.2 and 8.7.3 of CaHST Design Criteria. PPDG sec 2.4.2.2 for water quality criteria.	N/A
43	Outlet Facilities	Minimum size of low flow outlet is 18". Min size of riser is 36". Min spillway length is 3'. Riser pipes with low flow orifice openings can be used for low and high flows. Min freeboard to riser/spillway is 2' over design storm. Emergency spillways can also be concrete weir structure.	Varies	8.7.4	HDM 830, PPDG	Equip all outlets with debris control. See Section 8.7.4 of CaHST Design Criteria. For detention basins used for water quality treatment, refer to Caltrans PPDG for additional requirements.	CTSP D93C

Appendix D - Drainage Criteria

No.	Design Element	Descriptor	Value	CaHSR Authority Book III, Part A - Design Criteria Manual Section	Supplemental Design Criteria	Remarks	CaHSR Standard Detail:
44	Basin Configuration	Width to length ratio >2, earthen embankment slopes no steeper than 4:1, rip rap slopes no steeper than 3:1. Site dictates shape, can be elliptical, triangular, rectangular, trapezoidal etc. Place 12' access road around basin.	N/A	8.7.3	PPDG, HDM Table 831.3	Size based on 25-yr discharge from depressed local road. See sections 8.7.2 and 8.7.3 of CaHST Design Criteria. 50-yr for State Highways in Depressed Section	N/A
45	Hydrograph Analysis-Pump Stations	Pump stations will be sized based on 25yr event with 50yr check	25-yr	8.5.2.6	HEC-24, Ch16,17 and 27 in Design Criteria	Pump Station Design per Section 8.5.2.6 of CaHST Design Criteria.	See FHWA HEC-24 requirements for flow rate reduction prior to conveyance to their storm drain system.
46	Storage/ Pumps/ Motors	Provides volume of storage necessary for wet well in Pump Station and downstream detention if required.	N/A	8.5.2.6	HEC-24, Kings County Improvement Standards	For Roadway PS - Storage Box used for wet well. Each PS equipped with 2 pumps/ motors and water level sensors placed at various depths for pump control and high level alarm. Motor and Control Room above grade. For Track/Trench PS - wet well placed at side of trench with pumps conveying flow to detention basin then to outfall. Temporary sump pump used for temporary condition prior to placement of track.	FHWA HEC-24, Section 8.5.2.6 of CaHST Design Criteria
47	Freeboard Protection	A minimum of 2' (3' with debris concerns) of freeboard required between soffit of bridge and design water surface for 100-year event. See 16 for allowable rise.	100-yr/200-yr	8.6.3.1		Coordinate with ACOE and CVFPB as necessary for work within floodplains/ floodways of major streams.	FHWA HDS-01
48	Pier Placement	Design piers to minimize impacts to water surface. Streamlined design of pier nose to be considered in streams (rounded shapes upstream and possibly downstream) align bents in direction of flow, minimize number of piers in waterway.	N/A	8.6.3.3		Consider type of debris that could impact piers in streams and design protective devices as necessary. Review FHWA HEC-09 for debris control measures.	FHWA HEC-09
49	Box Culverts	Box culvert structures shall be protected with AR fencing around headwall	N/A	7.8.4.6		Grates required if Threat & Vulnerability Analysis indicates need. Except at Wildlife crossings.	Directive Drawings DD-CV-903
50	Wildlife Crossing	Location & spacing along corridor	0.3 miles	7.9	Final Environmental Impact Statement, Biological Resources and Wetlands Section	Incidental Take Permit	N/A
		Size criteria	0.41 Open-ness Ratio	7.9	Biological Resources and Wetlands Technical Report & refer to Figures 5-7a through 5-7c and Section 5.6 of the Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report (Authority and FRA 2012a).	Up to 100-feet in length, must have O.R. > 0.41	N/A
51	Culverts - Under Tracks	Culvert Location relative to abutments	100-feet	12.8.6.2		The length of embankment between abutments shall not be less than 500 feet. The length of embankment between an abutment and a culvert shall not be less than 100 feet. If closer spacing is required, then the embankment shall be specially treated such that a constant gradient of stiffness shall be provided between the 2 adjacent bridges. Refer to the Geotechnical chapter for specific requirements for embankment fills and abutment backfill.	
52	Siphons (Under HSR)	Material	Steel, Concrete, Plastic	8.5.2.5		Welded smooth steel pipe with internal ceramic coating, precast concrete pressure pipe, reinforced plastic mortar pressure pipe	
		End Structures & Transitions & Losses	Structures	8.5.2.5		Outside HSR ROW, for > 36" diameter, use x10% factor of safety for headloss	
		Cover	3-feet	8.5.2.5		3-feet compacted earth cover	
		Slope under HSR	0.5%>S>50%	8.5.2.5		Welded smooth steel pipe with internal ceramic coating, precast concrete pressure pipe, reinforced plastic mortar pressure pipe	
		Velocity	<2.5 fps or <10-fps	8.5.2.5		2.5 fps for short siphon with concrete transistion and inlet/outlet or 10fps for a long siphon with concrete transitions or control structure inlet/outlet	
		Freeboard	50% increase or 1-foot	8.5.2.5		canal upstream to prevent washouts.	
53	Siphons (Under Roads)	Cover	4.5-feet		HDM 829.7 Siphons and Sag Culverts	where possible	N/A
		Material	RCP, CMP,		HDM 829.7 Siphons and Sag Culverts	RCP, joint seals, CMP, protect coatings for design life	N/A

EXHIBIT H

Verification for Application

**Dragados Flatiron Joint Venture
1775 Park Street Suite 75
Selma, CA 93662**

Exhibit H Verification

I am an officer of the California High-Speed Rail Authority, Applicant herein, and am authorized to make this verification on its behalf. The contents of this document are true of my own knowledge, except as matters that are stated on information or belief, and as to those matters, I believe them to be true.

Dated this 22 day of JUNE, 2018 at Sacramento, California.

Signed



Bruce W. Armistead
Director of Operations and Maintenance
California High-Speed Rail Authority
770 L Street, Suite 620
Sacramento, CA 95814
Tel: (916) 324-1541

EXHIBIT I

Notice of Availability

Final EIR / EIS Fresno to Bakersfield Section of California High-Speed Train Project

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of the California High-Speed Rail Authority for approval to Construct two New Underpass Grade Separated Crossings, Under the Proposed High-Speed Rail Tracks at 9th Avenue (215.67) and Cairo Avenue (216.09) Located in the County of Kings, State of California.

Application No. _____

NOTICE OF AVAILABILITY

**FINAL ENVIRONMENTAL IMPACT REPORT / ENVIRONMENTAL IMPACT
STATEMENT FOR THE FRESNO TO BAKERSFIELD SECTION OF THE CALIFORNIA
HIGH-SPEED TRAIN PROJECT**

TO ALL PARTIES TO THIS APPLICATION:

In support of its applications, the California High-Speed Rail Authority (Applicant) submitted the *Final Environmental Impact Report / Environmental Impact Statement for the Fresno to Bakersfield Section of the California High-Speed Train Project (Final EIR / EIS)* on an archival CD-ROM/DVD and six copies on standard CD-ROM/DVD to the Docket Office for physical filing as Exhibit I to application A1709017.

Pursuant to Rule 1.9(d) of the Commission's Rules of Practice and Procedure, the Applicant is issuing this Notice of Availability (NOA). The NOA is being served on all parties listed on the official service lists for this application, which are attached as Exhibit K – Certificate of Service.

The Final EIR/EIS is available at the following URL, which has been posted on the web since 2014: http://www.hsr.ca.gov/Programs/Environmental_Planning/final_fresno_bakersfield.html

California High Speed Rail Authority
Bruce Armistead
Director of Operations and Maintenance
Sacramento, CA 95814
Bruce.Armistead@hsr.ca.gov

EXHIBIT J-1

Scoping Memo

9th Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

Scoping Memo Information for Applications

A. Category (Check the category that is most appropriate)

☐ Adjudicatory - “Adjudicatory” proceedings are: (1) enforcement investigations into possible violations of any provision of statutory law or order or rule of the Commission; and (2) complaints against regulated entities, including those complaints that challenge the accuracy of a bill, but excluding those complaints that challenge the reasonableness of rates or charges, past, present, or future, such as formal rough crossing complaints (maximum 12 month process if hearings are required).

X Ratesetting - “Ratesetting” proceedings are proceedings in which the Commission sets or investigates rates for a specifically named utility (or utilities), or establishes a mechanism that in turn sets the rates for a specifically named utility (or utilities). “Ratesetting” proceedings include complaints that challenge the reasonableness of rates or charges, past, present, or future. Other proceedings may also be categorized as ratesetting when they do not clearly fit into one category, such as railroad crossing applications (maximum 18 month process if hearings are required).

☐ Quasi-legislative - “Quasi-legislative” proceedings are proceedings that establish policy or rules (including generic ratemaking policy or rules) affecting a class of regulated entities, including those proceedings in which the Commission investigates rates or practices for an entire regulated industry or class of entities within the industry.

B. Are hearings necessary? Yes X No

If yes, identify the material disputed factual issues on which hearings should be held, and the general nature of the evidence to be introduced. Railroad crossing applications which are not controversial usually do not require hearings.

Are public witness hearings necessary?

Yes X No

Public witness hearings are set up for the purpose of getting input from the general public and any entity that will not be a party to the proceeding. Such input usually involves presenting written or oral statements to the presiding officer, not sworn testimony. Public witness statements are not subject to cross-examination.

C. Issues - List here the specific issues that need to be addressed in the proceeding.

None.

D. Schedule (Even if you checked “No” in section “B” above) should the Commission decide to hold hearings, indicate here the proposed schedule for completing the proceeding within 12 months (if categorized as adjudicatory) or 18 months (if categorized as ratesetting or quasi-legislative).

The schedule should include proposed dates for the following events as needed:

__Date_6/28/18__Filing Date

__Date_7/28/18__Comment Period (1 month from filing)

__Date_10/28/18__Proposed Decision (4 months from filing)

__Date_12/28/18__Final Decision (6 months from filing)

If hearing unexpectedly becomes necessary:

__Date____Prehearing conference

__Date____Hearing

__Date____Brief due

__Date____Submission

__Date____Proposed decision (90 days after submission)

__Date____Final decision (60 days after proposed decision is mailed)

EXHIBIT J-2

Scoping Memo

Cairo Avenue

Dragados Flatiron Joint Venture

1775 Park Street Suite 75

Selma, CA 93662

Scoping Memo Information for Applications

A. Category (Check the category that is most appropriate)

☐ Adjudicatory - “Adjudicatory” proceedings are: (1) enforcement investigations into possible violations of any provision of statutory law or order or rule of the Commission; and (2) complaints against regulated entities, including those complaints that challenge the accuracy of a bill, but excluding those complaints that challenge the reasonableness of rates or charges, past, present, or future, such as formal rough crossing complaints (maximum 12 month process if hearings are required).

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__Date_12/28/18__Final Decision (6 months from filing)

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__Date____Prehearing conference

__Date____Hearing

__Date____Brief due

__Date____Submission

__Date____Proposed decision (90 days after submission)

__Date____Final decision (60 days after proposed decision is mailed)

EXHIBIT K

Certification of Service

**Dragados Flatiron Joint Venture
1775 Park Street Suite 75
Selma, CA 93662**

CERTIFICATE OF SERVICE

I, Valentin Ibarra, of Dragados Flatiron Joint Venture, on behalf of the California High-Speed Rail Authority, certify that I have this day mailed a copy of the attached Application and Exhibits in the above captioned proceeding by FedEx, or if noted, by e-mail or hand delivery, to each party named in the following service list, on this 28th day of JUNE, 2018 at Selma, California.

By: 
Valentin Ibarra
Office/Project Engineer

Service List	
Parties:	
Bruce W. Armistead Director of Operations & Maintenance California High-Speed Rail Authority 770 L Street, Suite 620 Sacramento, CA 95814 Bruce.Armistead@hsr.ca.gov Email Only	Jorge Granados CP 2-3 Construction Manager California High-Speed Rail Authority 1401 Fulton Street, Suite 300 Fresno, CA 93721 Jorge.Granados@hsr.ca.gov Email Only
State:	
Anne Simon Chief Administrative Law Judge California Public Utilities Commission 505 Van Ness Avenue Anne.Simon@cpuc.ca.gov San Francisco, CA 94102 Email Only	Michael Robertson, P.E., Manager Rail Crossings and Engineering Branch California Public Utilities Commission 320 West 4th Street, Suite 500 Los Angeles, CA 90013 michael.robertson@cpuc.ca.gov Email Only
Marvin Kennix, Utilities Engineer Rail Crossings and Engineering Branch California Public Utilities Commission 180 Promenade Circle, Suite 115 Sacramento, CA 95834-2939 marvin.kennix@cpuc.ca.gov Email Only	Anton Garabetian, P.E., Supervisor Rail Crossings and Engineering Branch California Public Utilities Commission Antranig.garabetian@cpuc.ca.gov Email Only

Information Only:

Jose de Jesus Martinez CP 2-3 Third Party Oversight/Contracts Manager California High-Speed Rail Authority 1775 Park Street, Building 75A Selma, CA 93662 JosedeJesus.Martinez@hsr.ca.gov Email Only	Drew Erickson CP 2-3 Third Party Manager Dragados Flatiron Joint Venture 1775 Park Street, Building 75 Selma, CA 93662 derickson@dfcp23.com Email Only
Dominic Tyburski County of Kings 1400 W. Lacey Blvd Hanford, CA 93230 Dominic.Tyburski@co.kings.ca.us Email Only	Kevin McAlister Kings County Public Works Director County of Kings 1400 W. Lacey Blvd Hanford, CA 93230 Kevin.McAlister@co.kings.ca.us Email Only